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ABSTRACT

This report documents the activities of 18 state-funded partnerships in Arizona's school-to-work (STW) system: 10 regional partnerships, most in their fourth year of implementation, and 8 Maricopa County partnerships, all in their first year of implementation. The report is divided into two sections. The first section highlights the status of each of the 10 regional STW partnerships as of the midpoint of the state's fourth year of STW implementation. Profiles are provided in alphabetical order and provide a brief description of the changes and accomplishments in the past year. The second section profiles each of the 8 Maricopa County STW partnerships approximately three-quarters of the way through their first 13 months of STW implementation. Profiles are provided in alphabetical order and provide a brief description of the status of partnership activities and accomplishments to date. Each profile consists of the following seven components: (1) partnership name; (2) site visit date; (3) school profile; (4) employers/Governor's Strategic Partnership for Economic Development representation; (5) goals 1-6: system governance and partnership development, program coordination and integration, technical assistance, community involvement, public awareness, and system evaluation; (6) discussion (partnership assets, partnership challenges); and (7) summary and suggestions. (YLB)

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Arizona's School To Work System

Site Visit Reports (1998-99)

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Morrison Institute for Public Policy
School of Public Affairs
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Arizona's School To Work System

Site Visit Reports (1998-99)

Prepared for:

The Arizona Department of Commerce

School To Work Division
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Research Analysts

December 1999

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Introduction

In October 1995, Arizona received a School To Work (STW) implementation grant from the U.S. Departments of Labor and Education for the purpose of creating a comprehensive statewide system of school-to-work opportunities. In January 1996, the State Agency for School To Work solicited bids throughout the state from local "contractors" proposing to plan or implement regional STW systems. As a result of this competitive process, 13 partnerships were awarded roughly $2.4 million to begin developing Arizona's STW system. These partnerships, consisting of business groups, educators, community organizations, and parents, proposed to develop and manage a range of school-based activities, work-based activities, and connecting activities.

During FY 1995-96, eight of Arizona's 13 partnerships operated under capacity building contracts while five were funded as implementation sites. Capacity building sites were in the earliest stages of system building and program planning. Implementation sites were funded with the assumption that at least rudimentary systems were in place and that partnerships would serve students through existing programs. Progress on these partnerships is reported in the document *Arizona's School To Work System: A Final Report on 13 Funded Partnerships* (Frumkin & Vandegrift, 1996).

For FY 1996-97, the state agency again issued a request for proposals. Thirteen STW contracts again were awarded. These contracts encompassed 11 of the originally funded partnerships plus a Pinal County STW Partnership and a Phoenix STW Initiative. Two Partnerships funded in 1995-96 did *not* receive funds through the RFP process — the InterTribal Council of Arizona and Northeastern Arizona Native American School-to-Work partnership (NEAZNAS). ITCA *did* receive funding from the state as a technical assistance service provider for all partnerships. NEAZNAS, although unfunded at the state level, did receive a direct federal grant under the Urban-Rural Opportunities Grant competition. State-funded partnership progress for FY 1996-97 is reported in the document *Arizona's School To Work System: A Final Report of 13 Funded Partnerships* (Hunt Larson and Vandegrift, 1997).

A significant change in the state's overall partnership structure was realized in 1997-98. Four partnerships within Maricopa County chose to reject the state's "Best and Final Offer" in the fall of 1998. Subsequently, eight new partnerships were established through a second RFP process. The new partnerships were designed to align with Arizona's economic development industry "clusters" as defined by the Governor's Strategic Partnership for Economic Development (GSPED). The eight new GSPED-STW partnerships differ somewhat in scope and organization from the original "regional" partnerships. In FY 1997-98, *only* regional partnership activities were described in a site visit report since the eight new partnerships within Maricopa County were not operational until June 1998. Regional partnership activities are described in the document *Arizona's School To Work System—Site Visit Reports (1997-98)* (Hunt Larson, 1998).

During FY 1998-99, School To Work implementation contracts again were awarded to the state's ten continuing regional partnerships. Additionally, this was the first "full year" of implementation for the eight Maricopa County partnerships originally funded in June of 1998. Therefore, this report — *Arizona's School To Work System—Site Visit Reports (1998-99)* (Hunt Larson and Engmark, 1999) — documents the activities of 18 state-funded partnerships: ten regional partnerships, most of which are in their fourth year of implementation, and eight Maricopa County partnerships, all of which are in their first year of implementation. Figure 1 (page 3) depicts these 18 state-funded regional partnerships as well as the locations of partnerships receiving direct federal funds.

The report is divided into two sections. The first section highlights the status of each of the ten regional STW partnerships as of the midpoint of the state's fourth year of STW implementation. Profiles are provided in alphabetical order and provide a brief description of the changes and accomplishments in the past year. Elizabeth Hunt Larson, a full time research analyst for Morrison Institute, was the state evaluator responsible for the conduct of regional site visits and documenting progress among the regional partnerships.

The second section profiles each of the eight Maricopa County STW partnerships as of roughly three-quarters of the way though their first 13 months of STW implementation. Profiles are provided in alphabetical order and provide a brief description of the status of partnership activities and accomplishments to date. Jill Engmark, a part-time contracted evaluator for Morrison Institute, was the state evaluator responsible for the conduct of Maricopa County site visits and documenting progress among these partnerships.

In each of the profiles—both regional and Maricopa County—evaluator impressions of the partnership's assets and challenges are based upon information obtained during a site visit to each partnership. Information included in the reports was derived from school/classroom/meeting observations, interviews with key staff including the partnership director, and written documentation provided by the partnerships. Site visits were conducted from February through April 1999. Other information used to supplement the partnership profiles includes: "Active School" information gathered by Morrison Institute for Public Policy on a semi-annual basis, October 1998 enrollment data obtained from the Arizona Department of Education, and measures of the extent of school involvement toward implementing STW gathered using the state's "Level of Involvement" survey.

In preparing this report, partnership directors were asked to review and approve draft versions of their profiles. Suggestions and corrections made by partnership personnel, when submitted, are incorporated into this document as appropriate.

Judith A. Vandegrift, Ph.D.
Arizona STW Research &
Evaluation Coordinator

The Principal Investigator of this report was Dr. Judy Vandegrift, who passed away in September 1999. It was edited posthumously.

Figure 1. Arizona'a School To Work System: FY 1997-98 Sites

= State Funded (9 regional sites; *Maricopa= 8 sites)

● = State and Federally Funded (1 site)

● = Federally Funded (6 sites)

Regional Partnership Profiles

Cochise STW Partnership

Site Visit: February 16, 1999

Region Served: Cochise County

FY 1995-96 funding:	$ 245,000
FY 1996-97 funding:	393,102
FY 1997-98 funding:	262,161
FY 1998-99 funding:	226,159
Total investment to date:	$1,126,422

School Profile

The Cochise School To Work (STW) Partnership serves students in 11 elementary, two high school, and eight unified districts. Other schools include an accommodation district on a military base, charter schools, a private school, and Cochise Community College. In total for the 1998-99 school year, Cochise's regional partnership included schools enrolling more than 20,000 students in grades pre-kindergarten through 12 as shown in Table 1.

Table 1
Total Student Enrollment for the Cochise STW Partnership (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)*
Grades Pre-K through 6	11,253
Grades 7 through 8	3,276
Grades 9 through 12	6,017
Ungraded Elementary (K-8)	111
Ungraded Secondary (9-12)	253
TOTAL	20,910

*Note: Enrollment data reflect 56 schools for which data were available of the 59 public schools identified in this partnership.

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

Cochise County has three employment centers: Sierra Vista, Wilcox, and Douglas. The federal government is the largest employer, followed by education and agriculture. At least five GSPED clusters are represented in the county. The army base at Ft. Huachuca is a center for the High Technology and Software clusters. In addition, many small businesses contract with the federal government to develop software applications for military use. Many businesses in the Senior Living cluster support the needs of retirees. Businesses in the Tourism cluster support visitors at such attractions as Tombstone, Bisbee, and eco-tourism destinations. Businesses, farms, and ranches in Food, Fiber and Natural Products cluster produce agricultural products such as fruit, vegetables, cotton, and cattle and related services.

Goal 1: System Governance and Partnership Development

Partnership Governance and Staff

The partnership has maintained a governance structure that mirrors the state system. A STW Council is charged with system oversight and approval of the allocation of funds to ten local STW partnerships. Funds are allocated through a mini-RFP process that replicates the state's process with the exception that they must address at least one, but not all, of the state goals. Ten local community STW partnerships manage their own planning processes, activities, and funds based on the requirements set by the RFP and monitored by the larger oversight group. A voting educator and business member represent each region on the larger council. At this point, the director describes the board as very supportive and willing to adopt his recommendations. The director describes governance as effective and characterized by continuity.

The local processes are in place to evaluate funded projects. This feedback helps refine funding decisions. Ongoing efforts that were successful can be renewed and those that were not as effective can be pruned back.

School district coordinators serve as a point of contact in each local community. Three of ten receive a stipend. In nine communities the vocational director at the high school serves as the coordinator. An elementary principal represents one district.

The director has assumed the responsibility for the administrative functions of the partnership. He reports that, because evaluation and marketing processes have been established over the preceding three years, the impact of reduced staff is minimal. The willingness of the coordinators to assume some responsibility for localized data collection, marketing, and technical assistance makes reduced staffing at the partnership level possible.

Sustainability

The partnership has decided to encourage sustainability of the STW philosophy within the participating districts without attempting to maintain the structure of the existing partnership. The director described several enduring features which are the legacy of the partnership. Methods and activities that help students learn about careers, such as job shadowing, school based businesses, and field trips, will continue due to parent and student demand. According to the director, many STW tenets have been incorporated into the curriculum as well. The director believes that fewer inroads have been made in changing some "old-time" teachers' approaches. However, many newer teachers are receptive to using applied academics to enhance learning and have adopted it in their classrooms. According to the director, the partnership has had a lasting impact when students will be better able to make career choices and choose training to meet their goals. The Cochise College Foundation will accept tax deductible contributions to help support future STW initiatives.

Goal 2: Program Coordination and Integration

Program Coordination and Integration

The partnership continues to collaborate with a number of educational initiatives. Joint planning is conducted at combined agency staff meetings. Furthermore, many individuals who help plan and implement STW activities are also responsible for vocational programs in the schools. The relationship with Tech Prep programs is similarly aligned. This ensures that there is little duplication of effort and that

resources are used where they are needed most. The director indicated that there have not been any changes in the level of coordination since the previous year.

The Career Pathways initiative is continuing to gain momentum among area districts. The adoption of Pathways, however, is felt to be somewhat dependent upon use of a Comprehensive Competency-Based Guidance (CCBG) system. Although only one school—Sierra Vista School District —has formally adopted the CCBG system, it has been presented to all counselors over the past three years at the Counselor's Academy. Therefore, to some extent all schools have incorporated some form of Pathways and have adopted it to meet their own needs.

The relationship with higher education is improved in that, at the state level, the legislature has mandated Arizona General Educational Requirements. The plan outlines a statewide articulation agreement between the two-year institutions and the universities. Students are able to transfer 64 credits to the university.

Universal Access:
School Participation and Roll-out Strategy

For FY 1998-99, data were collected from each partnership regarding the status of schools considered to be "active" within their region. "Active" schools are defined as those which formally partner with the regional STW partnership and which involve at least some of their students in STW activities as described on the national *Progress Measures* (see Appendix A).

The Cochise Partnership reported that all public schools were "active" participants as of March 1999. "Active" schools are summarized in Table 2. The partnership strategy is to focus efforts to support successful programs and encourage a higher percentage match from schools and businesses.

Table 3 details active school participation in the partnership, according to the state's "Level of Involvement" (LOI) survey conducted in Spring 1998. The LOI survey describes school involvement in STW. This survey was used at the partnership level to help plan technical assistance and roll-out strategies and provides a state-wide indicator of systems change. The survey, designed by a team of regional evaluators, incorporated concepts from the national *Progress Measures* survey. Areas measured include: depth of school participation in terms of the student population served and the degree to which STW concepts are institutionalized in the school; curriculum, assessment and instructional practices; level of business involvement and relationship to GSPED cluster industries; and affiliation with the local/regional partnership.

Only active public schools (those who have implemented student STW activities and formally partner with the regional partnership) are included in Table 3. When asked to describe how the school is associated with the local/regional STW partnership, 86% of the schools reported receiving technical assistance. Approximately half of that number reported receiving funding or participating in planning.

Table 2
"Active" School Participation for the Cochise STW Partnership

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active" Schools (FY 1998-99)					
	E/J	M/J	J/S	K-12	Total	E/J	M/J	J/S	K-12	# Total	% Total
Apache ESD	1				1	1				1	100
Ash Creek ESD	1				1	1				1	100
Benson ESD	2				2	2				2	100
Benson UHSD			1		1			1		1	100
Bisbee Unified	2		1		3	2		1		3	100
Bowie Unified	1		1		2	1		1		2	100
Cochise ESD	1				1	1				1	100
Double Adobe ESD	1				1	1				1	100
Douglas Unified	7	2	1	1	11	7	2	1	1	11	100
Douglas Unified: Programs			1		1			1		1	100
Elfrida ESD	1				1	1				1	100
Ft. Huachuca	2	1			3	2	1			3	100
McNeal ESD	1				1	1				1	100
Naco ESD	1				1	1				1	100
Palominas ESD	2				2	2				2	100
Pearce ESD	1				1	1				1	100
Pomerene ESD	1				1	1				1	100
San Simon Unified	1		1		2	1		1		2	100
Sierra Vista Unified	6	2	1		9	6	2	1		9	100
St. David Unified	1		1		2	1		1		2	100
Tombstone Unified	2		1		3	2		1		3	100
Valley Union UHSD			1		1			1		1	100
Willcox Unified	2		1		3	2		1		3	100
Charter Schools			5		5			5		5	100
TOTAL PUBLIC SCHOOLS	37	5	16	1	59	37	5	16	1	59	100
Private Schools				1	1				1	1	100
Department of Youth Treatment			1		1					0	0
TOTAL	37	5	17	2	61	37	5	16	2	60	98

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

Table 3
Type of Active School Participation: Cochise STW Partnership

Level of Involvement School Survey-Spring 98	Active Schools			
	Partnership		State	
	N	%	N	%
Participate in local/regional STW planning	18	37%	140	50%
Receive technical assistance	42	86%	203	73%
Receive funding	20	41%	135	48%
Other unspecified	2	4%	23	8%
Total that responded to this question*	49	100%	280	100%

* May be counted in more than one category

Integration with One-Stop Career Centers

The One-Stop Career Center concept is not fully developed in Cochise County. Workforce development services are offered at separate locations throughout the county. The major initiative underway is the development of Internet access to all of the services that will be accessed at a variety of sites. Hardware and software issues have been addressed and Tech Prep and STW home pages were developed under the One-Stop funding. The pages have since moved to the college with links to the One-Stop. The effort, however, is in its infancy. According to the director of the One-Stop, the funds will be depleted before the system can be fully implemented.

Other partners include the JTPA (Job Training and Partnership Act) serving out-of-school youth, the Cochise County Workforce Compact, and the Arizona Department of Economic Security. A joint effort to expand services and avoid duplication has been ongoing for five years with these partners and those in the educational community.

Targeted Access for Special Populations

The director stated that serving special populations has always been a main goal of the partnership. Many mainstreamed special education students participate in STW activities such as resume writing, class projects, and work-based experiences. The Youth Transition Program serves special needs students as well. Out-of-school youth are targeted through the Cochise Private Industry Council, two alternative high schools, and charter schools. Other groups of students are served by virtue of the inclusive nature of STW. Many of the students who attend the summer camps could be classified as having special needs. The summer camps expose students to postsecondary opportunities.

STW Elementary, Middle, High School, Postsecondary Initiatives

San Simon School was observed as a part of the site visit. The K-12 school uses STW across all the grade levels. The school is notable because they have a systemic effort that is highly coordinated and integrated. The counselor discussed student activities. The school has a regional computer lab which offers training to teachers and administrators and is also used by students. The students have software that allows them to do career exploration and to access information and make contacts with an industry. All grade levels

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have portfolios, assessment instruments, and both school-based and work-based experiences. Students are also held to very high academic standards. As an example of the work-based component, all of the Junior and Senior classes went to Safford for Groundhog Job Shadow Day. Students are also involved in a variety of school- based enterprises. The small community has been active in helping students with their businesses.

Partnership statistics are collected quarterly for each local partnership. According to these reports, as of the third quarter of 1998-99 at least 60% of all students received career information at school. Over 4,000 students used career centers and many students had career related field trips. Results of a state survey of school level of involvement are presented in Table 4. Active schools were asked to describe their activities in more detail. Overall, 53 active schools in the partnership that responded had a high level of activity.

Table 4
Level of Involvement Survey Spring 1998: Cochise STW Partnership Active Schools

	Elementary		Middle/Junior High		High School		Total	
Indicators	Partnership	State	Partnership	State	Partnership	State	Partnership	State
Percent of schools with activities at least monthly	76%	62%	80%	75%	100%	85%	83%	70%
Percent of activities used	77%	68%	93%	75%	81%	73%	80%	70%
Percent of schools with at least 50% of students participating	74%	79%	100%	79%	100%	88%	83%	81%
Percent of schools with school-wide or institutionalized activities	18%	21%	40%	39%	57%	43%	31%	29%
Mean level of business involvement (1-3)	1.6	1.3	1.9	1.4	1.6	1.5	1.6	1.4

Elementary

Overall, more than three-fourths of the 33 active schools that reported have activities at least monthly, involving at least half of the students. Table 4 shows that less than one fifth of the schools have institutionalized activities. The overall level of activity exceeds that of the regional partnerships as a whole. Most frequently reported activities for elementary schools are: career guest speakers (97%), field trips (82%), class projects (82%), career inventories (79%), and career fairs (70%). The Cochise STW Partnership, compared to the regional partnerships as a whole, has a relatively higher share of schools offering staff training (88%), curriculum development (70%), and computer-assisted career exploration (64%).

Middle/Junior High

Five active middle schools responded to the LOI survey. These schools reported career inventories, field trips, career mentoring, guest speakers, class projects, computer-assisted learning, staff training, and curriculum development. On most indicators, middle/junior high schools' level of activity exceeds the partnership as a whole. Perhaps most notable is that these schools appear to have a higher level of business involvement than their elementary and high school colleagues, and exceed the "mean level of business involvement" for the partnership as a whole.

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High School

Fourteen active high schools responded to the survey. All of the schools reported conducting activities at least monthly, involving at least half of the students. More than half of the schools reported that activities are institutionalized. All of the schools reported career guest speaker and computer-assisted instruction. Career inventories were reported in all but one school. All except two (86%) use field trips, class projects, and train staff. Eleven (79%) use career fairs and school-based enterprises. The director highlighted a Young Entrepreneurs Conference sponsored by the Cochise College Small Business Development Center and the partnership. This conference, titled You're the B.O.S.S. (Business Ownership Success Strategies), was an interactive conference for students in grades 9-12. Groups of students participated in a simulated business start-up with the help of local business people. Student evaluations of the event indicated that the experience taught them "the importance of teamwork" and economic concepts such as "supply and demand; why things cost what they do."

Career Counseling

The partnership co-sponsored a workshop for counselors. The theme of the workshop was "Counseling, Curriculum and Careers." This allowed counselors the opportunity to crosswalk several courses with outcomes. The director felt that the workshop was effective in engaging approximately 50 attendees. The partnership supports and encourages the adoption of the CCBG system. The Sierra Vista School District is a model of implementation.

Goal 3: Technical Assistance

Ongoing Needs Assessment

The partnership continues to collect and review information from participating local partnerships on a quarterly basis. Furthermore, site visits are conducted and an ongoing dialog exists between partnership staff and coordinators. The director also presents at various meetings and is able to obtain feedback and suggestions from the community. Formalized needs assessments and a GSPED business survey also have been used to evaluate needs.

Curriculum/Assessment Initiatives (Including Career Pathways, *K-12 Workplace Skills*, applied/contextual curriculum)

The partnership has provided information about existing curricular models and is a frequent resource to help districts select materials. Career Pathways, GSPED clusters, and Arizona's *K-12 Workplace Skills* have been emphasized. A curriculum unit developed by a teacher in Bisbee was recognized as one of Arizona's 5-Star Outstanding Practices. The project uses the Internet to have students conduct research and simulate a trip around the world.

Professional Development Initiatives (Including business and educators)

Technology training for educators has been offered with the assistance of Cochise College. The director offers classes in Internet, Word, and e-mail. A grant from US West provided financial support for educators and business partners to participate in the program. The partnership also supports counselor training through the Counselor's Academy sponsored by the Arizona Department of Education. Training on the STW philosophy and methodology is offered at a yearly workshop as well. Businesses are trained as a result of their participation in school activities.

Goal 4: Community Involvement
(Including employers and the community-at-large)

Strategies to involve the community are tied to the public awareness strategies. The director uses direct contact, presentations at community-based organizations, and the media to publicize and to involve community members. The individual partnerships are responsible for developing strategies in their own local communities.

Goal 5: Public Awareness

For the period July through December 1998, there were three presentations and four direct mailings, as well as one television spot and 21 newspaper articles. The partnership estimates that they made 525 student contacts, 1,000 business and industry contacts and 340 general contacts for a total of 1,865 contacts through either direct mail or presentations. The director considers one of the highlights a full-page "Back-to-School" advertisement that was placed in every Sunday paper in the county. The article received a lot of attention. The coverage even reached small communities where the paper is published bi-weekly. The television campaign was less successful, however, according to the director. Other strategies that have proven to be effective are public speaking engagements, a newsletter, and a web page.

Goal 6: System Evaluation

Evaluation is conducted through quarterly activity reports, site visits, needs assessments and state and federal data collection instruments. The partnership has used data to focus programs and to design technical assistance. Business surveys have been conducted in all local community partnerships and a needs assessment survey is planned.

Discussion

Partnership Assets

The Cochise Partnership has been extremely effective in building a system to support the implementation of STW in schools. By coordinating with existing programs and requiring local participation, efforts are integrated and supported by participating schools. Many elements of the STW philosophy have been adopted within schools and have enriched existing curricula. Therefore, many of the elements of STW will be sustainable beyond the life of federal funding. According to the director, alignment of partnership efforts with other initiatives has been a key goal. Processes are also very well defined and governance has been stable.

Partnership Challenges

Although many elements of STW have been adopted and incorporated into the schools, some are more difficult to fully realize. For example, the use of applied academic curriculum is still a challenge for many teachers. Other concepts such as CCBG have been introduced but have not yet been fully implemented. Even though all schools are above the state averages in their level of involvement, few have fully institutionalized STW. In general, other challenges facing Cochise school districts, similar to other rural areas of the state, are limited funding for capital improvements and the impact of declining enrollment.

Summary and Suggestions

The Cochise Partnership has a well-conceptualized plan and has been very successful in meeting its goals. The value of partnership system-building efforts is evident. Nonetheless, the partnership should address how work-based experiences and career exploration can continue to be sustained for all students beyond the life of federal funding. More difficult challenges such as curricular integration and teacher training may not be within the scope of the existing partnership. However, some preliminary steps such as the identification of key stakeholders and resources may support continuation of what has begun in local communities.

The partnership should continue to use its focused approach to allocating funds. Resources for training should focus on application of technology to deliver STW services to students and to support sustainability.

Local programs are obviously of merit and should be encouraged to share their successes both within the partnership and at the state level. Expansion of the communication network between schools may be one strategy to ensure continuation of practices. Sharing responsibility with others for coordination and implementation could enhance the coordinator's role.

Coconino County STW Partnership

Site Visit: March 16, 1999

Region Served: Coconino County

FY 1995-96 funding:	$ 67,754
FY 1996-97 funding:	305,275
FY 1997-98 funding:	202,750
FY 1998-99 funding:	101,763
Total investment to date:	$757,542

School Profile

The Coconino County School To Work (STW) Partnership serves students in five public school districts as well as charter and private schools. Four unified districts, Page, Williams, Flagstaff, and Grand Canyon serve the greatest share of students. In total for the 1998-99 school year, Coconino's regional partnership included 41 public schools enrolling more than 17,000 students in grades pre-kindergarten through twelve as shown in Table 1.

Table 1
Total Student Enrollment for the Coconino County STW Partnership (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)*
Grades Pre-K through 6	9,237
Grades 7 through 8	2,803
Grades 9 through 12	5,544
Ungraded Elementary (K-8)	0
Ungraded Secondary (9-12)	0
TOTAL	17,584

*Note: Enrollment data reflect 41 public/charter schools identified in this partnership.

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

Businesses located in Coconino County can be classified in several GSPED clusters. Businesses in the Tourism cluster are predominant since the region is a tourist destination for people from around the world. Other businesses in the Flagstaff, Page, Williams, and Grand Canyon communities include the Navajo Power Station, the National Park Service, W. L. Gore, Ralston Purina, New England Business Services, and Wisconsin Tissue. Northern Arizona University (NAU) is the largest employer in Flagstaff and there are numerous small businesses in all of the communities.

Goal 1: System Governance and Partnership Development

Partnership Governance and Staff

The partnership governance structure continues to consist of an executive board, regional task forces, and partnership staff. Regional task forces help oversee activities in each community. School coordinators are

also in place. Staff, including a director, an administrative assistant, a marketing coordinator, and an evaluator, oversee the daily operations of the partnership.

The executive board meets quarterly to approve the budget. According to the director, membership has changed slightly due to illness of some members. Board representatives include the Grand Canyon, Flagstaff, Page, and Williams school districts, a community college representative, and business or agency representatives (nominated by the education membership) and a JTPA (Job Training Partnership Act) representative. Funds are allocated to projects through a contract-for-service and a mini-proposal process. The board has decided to shift its strategy to support school-wide systems building built around the Career Pathways initiative.

Task forces vary by community. The Grand Canyon Unified School District has a dedicated STW task force. In Page, STW has been incorporated as part of an existing Hospitality Task Force. The Page task force has been quite active in fund-raising and has increased the business participation over the past year, according to the director. The Chamber of Commerce serves as the community planning group in Williams. The Flagstaff task force was formed as a result of a "2020" community-wide visioning process. Key initiatives include job shadowing for school staff and student work-based experiences in the hospitality industry. The director believes that the Chamber in Flagstaff will be expanding its role. School coordinators are in place in the Flagstaff School District and help to coordinate activities between schools.

Partnership staff has remained stable since last year. Due to decreased federal funding, the evaluation and marketing functions have been reduced since last year. The director continues to represent STW in the community and is active in building collaborative relationships with community agencies. The relationship of staff is described as mutually supportive.

Sustainability

The partnership continues to collaborate with community agencies, educational programs, and business partners to ensure that STW will continue. The partnership also has applied for grant funding in related areas. A third strategy is increasing the depth of participation and ownership by schools and districts.

The director indicated that many events are coordinated across multiple agencies. Many of these events are expected to be continued due to combined resources. Six events sponsored by the Institute for Future Work Force Development at Northern Arizona University have been supported by Coconino STW. They were: the Hi-Tech Institute, Young Women's Leadership Conference, The Earth Circles Environmental Conference, Flagstaff VocFest, Statewide Diversity Conference and a workforce conference for young women. The Flagstaff STW task force initiated the first annual Tourism and Industry Fair for northern Arizona. Co-sponsors of this event were: the Flagstaff Convention and Visitor's Bureau, Coconino Tech Prep, Radisson Hotel, Flagstaff Unified School District, Northeastern Arizona Native American STW Partnership and the Institute for Future Work Force Development at NAU. STW partnered with the Rotary Clubs in Williams and the Grand Canyon to implement job shadowing for 55 students. Job shadowing in Flagstaff was conducted by STW in collaboration with Junior Achievement.

Grant funding has been pursued for Project CREATE, a proposal to serve at-risk youth. A proposal to fund a service learning center was submitted in collaboration with Volunteer Associates. An Annenberg grant was also discussed.

Many practices in local schools will continue beyond the life of STW federal funding. Schools and districts have been required to provide in-kind or matching funds to support programs. According to the director, many projects do not rely on STW funding. The local task teams have been encouraged to

consider STW as an integral part of the educational process and to develop strategies to strengthen the system within their community. Examples of sustainable initiatives include: Williams High School business partnerships; U.S. Park Service partnerships with the Grand Canyon and Page schools; and comprehensive changes in career counseling in the Flagstaff Unified School District.

Goal 2: Program Coordination and Integration

Program Coordination and Integration

The partnership has continued to collaborate with Tech Prep, NAU, Junior Achievement, and vocational programs within the schools. Many events are co-sponsored and planning teams include representation from many groups.

Incorporation of the Arizona Department of Education Career Pathways model has been expanded over the previous year. According to the state's "Level of Involvement" (LOI) survey conducted in spring 1998, eight of twelve active schools indicated that they use Career Pathways to help organize at least some career awareness activities. Much of the technical assistance offered to teachers and counselors includes a Career Pathways component. According to the director, Page, Williams and Grand Canyon districts have made "major steps" toward implementing Career Pathways. Flagstaff has begun discussions, but has not yet implemented Pathways. A new Flagstaff middle school magnet, Mount Eldon, has been established. It focuses on technology and arts and communication.

Coordination with higher education has included the events which were co-sponsored with NAU, articulation planning with Tech Prep, and collaboration with NAU's College of Business. The latter provides entrepreneurial workshops for students in Williams, Grand Canyon, Flagstaff and Page. The director also made a presentation to teacher training students at NAU.

Universal Access:
School Participation and Roll-out Strategy

For FY 1998-99, each partnership identified the "active" schools within their region. "Active" schools are defined as those which formally partner with the regional STW partnership and which involve at least some of their students in STW activities as described on the national Progress Measures (see Appendix A).

The Coconino County STW Partnership reported that 78% of all public schools were "active" participants as of March 1999. "Active" schools are summarized in Table 2. The partnership wants to engage more charter and private schools to expand participation. Charter schools have been encouraged to attend workshops and conferences and to submit proposals for mini-grants. For example, the Excel charter school has been awarded a mini-proposal grant. The partnership also hopes to expand the level of involvement of schools that are currently active by promoting Arizona's 5-Star Outstanding Practices.

Table 3 details active school participation in the partnership, according to the LOI survey conducted state-wide in spring 1998. This survey describes school involvement in STW and was used at the partnership level to help plan technical assistance, roll-out strategies, and provide a state-wide indicator of systems change. The survey, designed by a team of regional evaluators, incorporated concepts from the national *Progress Measures* survey. Areas measured include: depth of school participation in terms of the student population served and the degree to which STW concepts are institutionalized in the school; curriculum, assessment, and instructional practices; level of business involvement and relationship to GSPED cluster industries; and affiliation with the local/regional partnership.

Table 2
"Active" School Participation for the Coconino County STW Partnership

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active" Schools (FY 1998-99)					
	E/J	M/J	J/S	K-12	Total	E/J	M/J	J/S	K-12	# Total	% Total
Flagstaff USD	12	2	4		18	12	2	4		18	100
Grand Canyon USD	1		1		2	1		1		2	100
Maine Consolidated	1				1	1		1		1	100
Page USD	2	1	1		4	2	1	1		4	100
Williams USD	1		1		2	1		1		2	100
Charter Schools	8	2	2	2	14	1		2	2	5	36
TOTAL PUBLIC SCHOOLS	25	5	9	2	41	18	3	9	2	32	78
Private Schools	2	1		1	4	1				1	25
TOTAL	27	6	9	3	45	19	3	9	2	33	73

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

Table 3
Type of Active School Participation: Coconino County STW Partnership

Level of Involvement School Survey-Spring 98

	Active Schools			
	Partnership		State	
	N	%	N	%
Participate in local/regional STW planning	11	41%	140	50%
Receive technical assistance	18	67%	203	73%
Receive funding	13	48%	135	48%
Other unspecified	2	7%	23	8%
Total that responded to this question*	27	100%	280	100%

* May be counted in more than one category

Only active public schools (those who have implemented student STW activities and formally partner with the regional partnership) are included in Table 3. When asked to describe how the school is associated with the local/regional STW partnership, most active schools said that they received technical assistance or funding. A relatively smaller share of Coconino County STW schools reported receiving technical assistance or participating in local/regional STW planning when compared to the regional partnerships as a whole.

Integration with One-Stop Career Centers

The STW director attends One-Stop Career Center meetings. The county is a third-year implementation site. The center will be used to help students with resume writing, job searches and to help out-of-school

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youth find employment. One-Stop training about computer use to access career information was given to four staff during the year.

Targeted Access for Special Populations

Community transition teams in Flagstaff and Williams serve the needs of handicapped students. The Arizona Department of Rehabilitation Services and the Coconino Career Center have collaborated to provide work experiences for students at Continental Country Club. The partnership received funding to serve adjudicated youth and other at-risk populations through the Project CREATE grant. Other services currently are offered through NAU's Institute for Future Work Force Development. The partnership also funds services for out-of-school youth through GED sites. An equity task force was formed in 1997 and continues to be active. Several equity projects are on-going through the NAU Institute.

STW Elementary, Middle, High School, Postsecondary Initiatives

Each community served has participated through the contract and mini-grant process. The mini-grant process focuses on "encouraging the integration of vocational and academic instruction, integration of Career Pathways and GSPED clusters into the curriculum and encouraging contextual learning in partnership with business and agencies."

Of the partnership's 33 "active" schools, 28 participated in the state's LOI survey conducted in spring 1998. Details are provided in Table 4. Nearly 80% of the active schools reported conducting STW activities at least monthly. Three-fourths (75%) of the schools reported that at least half of the students in the school participated during the year. The share of schools involving half of the students is lower than the state as a whole (81%), however. Like the partnership as a whole, relatively few schools have school-wide or institutionalized activities (30%). The range of activities is also comparable to the overall partnership. Business involvement is described as moderate.

Table 4
Level of Involvement Survey Spring 1998: Coconino County STW Partnership Active Schools

	Elementary		Middle/Junior High		High School		Total	
Indicators	Partnership	State	Partnership	State	Partnership	State	Partnership	State
Percent of schools with activities at least monthly	94%	62%	67%	75%	50%	85%	79%	70%
Percent of activities used	67%	68%	55%	75%	75%	73%	68%	70%
Percent of schools with at least 50% of students participating	75%	79%	33%	79%	100%	88%	75%	81%
Percent of schools with school-wide or institutionalized activities	33%	21%	33%	39%	25%	43%	30%	29%
Mean level of business involvement (1-3)	1.6	1.3	1.4	1.4	1.3	1.5	1.5	1.4

Elementary

Eighteen public elementary schools (72%) were active as of March 1999. Sixteen active public schools responded to the LOI survey in spring 1998. Nearly all (94%) reported conducting activities at least monthly and three-fourths of the schools said that at least half of the students participated during the

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year. One-third of the schools indicated that activities are school-wide or institutionalized within the school. A notably greater share of Coconino elementary schools have monthly activities or institutionalized activities when compared to the state as a whole. Average business involvement also exceeds the state average.

At least half of the elementary schools reported using field trips (92%), career guest speakers (85%), class projects (69%), and school-based enterprises (69%). The partnership ranks highest among the regional partnerships in the share of schools reporting school-based enterprises.

During the site visit, students at Christensen Elementary School were observed. The mini-grant funded project introduces kindergarten students to the world of work. Parents and community members have come to the school and presented an overview of their jobs to students. Career awareness activities include field trips and follow-up conversations about careers. Students sang a song about careers which emphasized choices. Students have written books about their career awareness activities and assessed their own interests. Another part of the program involved older students tutoring the kindergarten class. The older students were given responsibility for real work experience and were very engaged in teaching the kindergartners. The teachers said that the peer tutoring project was beneficial for all students involved. Workplace skills are an important part of the learning process.

Other sites that have been recognized as an "Arizona 5-Star Outstanding Practice" include: Marshall Elementary School's business partnerships and Cromer Elementary School's "Kids Investigating Career Paths."

Middle/Junior High

Three of five middle schools were reported as active during the past year. Three schools responded to the LOI survey in 1998. All three reported using job shadowing, career fairs, and class projects with careers. Two schools reported having school-based enterprises and career mentoring.

High School/Postsecondary

All of the high schools were active during the past year. Nine schools responded to the LOI survey. All (100%) involve at least half of the students in STW compared with the state average of 88% serving at least half of the students. However, the percentage of Coconino high schools offering activities at least monthly or institutionalizing activities is less than the state's percentage overall. The percent of activities used in high schools (75%) is higher than the partnership in general (68%), while the average business involvement (1.3) is slightly lower than the partnership in general (1.5).

All of the high schools reported job shadowing and career guest speakers. All but one used computer-assisted career exploration, class projects with careers, and field trips to explore careers. Several programs have been recognized through Arizona's 5-Star Outstanding Practices including: Williams High School Air Touch Cellular phone partnership, the Page USD-National Park Service collaboration, and the 1998 Tourism and Hospitality Fair.

Career Counseling

The director is most proud of the ongoing efforts to implement Comprehensive Competency-Based Guidance (CCBG) in the Flagstaff Unified School District. The Flagstaff District formed a Career Guidance Steering Committee sponsored by STW. The committee included a counselor, administrator, academic teacher and a vocational teacher from each high school including the Tech Prep and STW

coordinators. The group surveyed instructors to determine current status and then cross-walked Arizona's *K-12 Workplace Standards* with CCBG. The alignment of curriculum across subject and grade level was accomplished. Training for all teachers was recommended in key areas including assessment, workplace skills, career planning and employability skills. One part of the effort was the publication and use of student portfolios within the schools.

The partnership also encourages school staff to attend the Counselor's Academy sponsored by the Arizona Department of Education.

Goal 3: Technical Assistance

Ongoing Needs Assessment

The director has assessed needs as a result of interaction with schools. Informal assessment of needs as well as direct requests are accommodated.

Curriculum/Assessment Initiatives
(Including Career Pathways, *K-12 Workplace Skills*, applied/contextual curriculum)

Curriculum and assessment initiatives are encouraged through the funded grant projects. Many of the projects are specifically funded to integrate Career Pathways and Arizona Workplace Skills into the curriculum. The partnership also provides training for teachers, sponsors attendance at conferences, and has facilitated committees to review curriculum. Others in the partnership, such as the Hospitality Task Force in Page, have been engaged in designing curriculum and defining articulation to postsecondary opportunities. The partnership director is a part of a Flagstaff steering committee charged with assessing Arizona standards including *K-12 Workplace Skills*. Some curricular materials such as "Careers on Wheels (COW)" has been ordered for elementary schools and will be distributed through the partnership.

Professional Development Initiatives
(Including business and educators)

The Coconino STW Partnership collaborated in sponsoring a Northern Arizona Guidance Academy in Chinle. Other training that has been provided to schools includes a Career Pathways workshop for Williams Unified School District school orientation and an "Elementary Community Connections Mini-Conference" for elementary school staff county-wide.

Teacher shadowing opportunities have been provided throughout the partnership. The "Educator for a Day-Partnerships for Life" program is offered in Flagstaff. STW co-sponsored teacher job shadowing in the workplace and business job shadowing in the schools with the Flagstaff Chamber of Commerce, City of Flagstaff, Coconino Community College, Flagstaff Unified School District, Junior Achievement, NAU, and Norwest Bank. The VIP (Valuable Innovative Partnerships) shadowing program will be conducted in Page, Grand Canyon, Parker and Williams.

Other Technical Assistance Activities

STW provides technical assistance to the Apache, Hualapai, Hopi, Navajo, and White Mountain Apache youth through support of NAU's Institute for Future Work Force Development. One of the main events that they sponsor is a yearly career fair for Native American Youth.

Goal 4: Community Involvement
(Including employers and the community-at-large)

The partnership has encouraged community involvement by establishing or partnering with task forces within each community to address STW needs. The primary strategy is coordination of community-based organizations. Events within each community also provide the venue for involvement. For example, Groundhog Job Shadow Day was a collaborative effort which had high visibility and engaged many businesses and community groups.

Goal 5: Public Awareness

For the period July through December 1998, there were 12 presentations and three direct mailings, as well as 11 television spots, one magazine article and 14 newspaper articles. The partnership estimates that they made 19 teacher contacts, one school administrator contact, 354 business and industry contacts and 2,508 general contacts for a total of 2,882 contacts through either direct mail or presentations. The participating programs have taken responsibility for publicizing some events.

The director mentioned several strategies were particularly effective. The Cosby television spots were well received. The director also did interviews for the public television station. Groundhog Job Shadow Day was also a big event. Over 200 people participated. The event tripled in size and a business partner donated lunch for the participants. The marketing consultant continued to participate in planning teams in the community and developed a web site on the Internet for the local partnership. The use of the business database resource bank has been expanded and promoted for teacher use.

Goal 6: System Evaluation

The partnership continues to meet state and federal requirements. The evaluator also has assisted programs to document outcomes and to enhance their ability to measure success. An evaluation of Williams High School programs was conducted. Several survey instruments were designed to collect information for local partnership use. Many of the planning teams have used the information provided by the partnership to help make decisions and to plan technical assistance.

Discussion

Partnership Assets

The partnership continues to leverage its efforts by collaborating with a variety of local community groups. Northern Arizona University coordinates conferences and events for students and has provided many services to students in the partnership. Other local groups such as the Chambers of Commerce, Rotary, and Junior Achievement also contribute a great deal. Grants have also been pursued to help schools supplement STW funding. The partnership has many sustainable elements due to this strategy. Job shadowing is another area of strength for the partnership that is facilitated through community groups. The support for STW shown by the participating community groups efforts is laudable.

Furthermore, several schools have well-developed partnerships with businesses. Based on the LOI survey, the elementary schools offer integrated programs to students. Schools report that activities occur more frequently than in the regional partnerships overall and a greater share of schools have institutionalized activities. Business involvement is also higher on average.

Partnership Challenges

Curriculum integration and the development of systemic STW practices which serve all students remain challenges. With respect to the latter issues, according to the LOI survey, this partnership's high schools involve all students less frequently than do high schools for the state as a whole. Fewer schools have institutionalized STW as a part of the curriculum. Middle/Junior High Schools also are less engaged than their statewide counterparts. Helping schools to increase the depth of student involvement is a task that the partnership faces.

Summary and Suggestions

The Coconino County STW Partnership should continue their efforts to build sustainable strategies. Community partnerships which have been established are positive, and community efforts should help to support ongoing programs. Funding decisions should reinforce sustainable strategies. Activities that are not heavily dependent on outside funding and that can be replicated without additional resources should be given preference. In-kind contributions and support from schools and businesses also should be pursued.

Strategies to increase the depth of and expand participation within schools should be encouraged. For example, the CCBG Task Force has the potential to make systemic changes in the schools. Furthermore, the integration of one-time events into the ongoing school curriculum would make them more meaningful. The efforts to link vocational and academic curriculum should be continued and emphasized.

Schools should be encouraged to submit nominations for Arizona's 5-Star Outstanding Practices and to share their successes with other partnerships in the State.

Eastern Arizona STW Partnership

Site Visit: March 22, 1999

Region Served: The Eastern Arizona School To Work (STW) Partnership serves Gila, Graham, and Greenlee Counties. The area extends from the eastern edge of Maricopa County to the New Mexico border. The area includes the community of Payson on the western side and Duncan on the far east. The area includes the San Carlos and Fort Apache Indian Reservations.

FY 1995-96 funding:	$ 50,000
FY 1996-97 funding:	250,919
FY 1997-98 funding:	241,139
FY 1998-99 funding:	210,645
Total investment to date:	$752,703

School Profile

Seven elementary districts, 12 unified districts, charter schools, an accommodation district, and a special services district are located within the partnership boundaries. The area is also served by several institutions of higher education.

Nearly 18,000 students in grades pre-kindergarten through 12 were enrolled in schools in Eastern Arizona's regional partnership in 1998-99 as shown in Table 1.

Table 1
Total Student Enrollment for the Eastern Arizona STW Partnership (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)*
Grades Pre-K through 6	9,342
Grades 7 through 8	2,807
Grades 9 through 12	5,028
Ungraded Elementary (K-8)	103
Ungraded Secondary (9-12)	135
TOTAL	17,415

*Note: Enrollment data reflect 55 schools for which data were available of the 55 identified in this partnership.

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

There are regional differences in the economic base of the three-county partnership area. Some communities rely upon copper mining (the GSPED Minerals and Mining cluster) and others are supported by tourism (the Tourism cluster). Cotton farming and ranching also are predominant in certain communities. Public sector employment is important across all communities in the partnership.

Goal 1: System Governance and Partnership Development

Partnership Governance and Staff

A leadership committee and partnership staff provide oversight and technical assistance to the entire partnership. Local implementation teams and local site coordinators plan and assist efforts within each region. Local implementation teams are in place in Graham/Greenlee County, southern Gila County and northern Gila County.

The leadership committee is comprised of three school superintendents, the President of Eastern Arizona College, and business and education representatives from each local partnership area. According to the director, this committee has remained stable over the year and concentrates on the strategic direction of the partnership, rather than daily operations. The director keeps the committee informed on a regular basis and the committee meets quarterly or as needed.

Local implementation teams have been very effective over the past year, according to the director. The structure provides local control and buy-in. Northern Gila County participants meet monthly and the director characterizes them as extremely collegial and active. Southern Gila County has also become more active during the year, according to the director. The Executive Director of the Globe/Miami Chamber of Commerce and the STW site coordinator in Globe have collaborated to promote and support STW. The Graham/Greenlee team continues to be effective as well.

Districts receive funds based on enrollment and may decide to allocate it to support school coordinators through salary or stipend. They also can spend money for supplies or travel. Most have chosen to provide a stipend for coordinators. School coordinators are charged with supporting STW efforts within their region. The partnership facilitates a quarterly meeting for coordinators at rotating sites in the partnership. The director notes that improved accountability has occurred due to monthly reports. The coordinators report on progress towards meeting goals and the technical assistance that is needed by local schools. Coordinators are the point-of-contact within the region and are responsible for recruiting and developing business partners.

The previous director was hired in February 1998 and left the position in August 1998. The evaluator was chosen as the successor to the position. She has been with the partnership since its inception and therefore, provides continuity in leadership. She describes the transition process as smooth. The coordinator structure has contributed to the ease of the change, according to the director. Marketing and administrative assistance continue to be contracted on a part-time basis.

Sustainability

Some elements of STW are embedded in local schools and will continue without partnership sponsorship, according to the director. Pockets of activity exist in every district. The partnership continues to encourage districts to incorporate STW elements into their curriculum.

Furthermore, in-kind contributions have been stressed. The director said that many districts are willing to pay transportation costs to have students attend a Career Expo at Eastern Arizona College. Schools also have assumed more of the cost for the summer career camps sponsored by the partnership. Projects have been funded with seed money with the expectation that, once begun, school enterprises will sustain themselves. Business partners and in-kind contributions are required for partnership funded projects.

The site coordinators have been charged with promoting themselves as assets within their own districts. The director is hopeful that many schools will recognize the value of the position and incorporate the function in their own budgets.

Goal 2: Program Coordination and Integration

Program Coordination and Integration

Coordination with other educational initiatives centers around several events. The Career Expo sponsored by Eastern Arizona College, the Arizona Department of Economic Security, Job Training Partnership Act (JTPA), Phelps Dodge, Tech Prep and STW was a collaborative effort serving more than 1,000 students. JTPA representatives also are represented on local implementation teams. However, Tech Prep tends to distance itself from STW efforts for the most part, according to the director. The partnership continues to encourage site coordinators to identify and link STW elements.

Career Pathways has been adopted by several schools in the partnership. For example San Carlos, Fort Thomas, Safford, and Thatcher use a Career Pathways booklet to counsel students. Rim Country Middle School in Payson uses Career Pathways with all students in eighth grade. Thatcher High School has organized site coordinators by Career Pathway. The partnership has supported the adoption of Career Pathways through providing training and materials.

Linkages with higher education have been promoted through joint events and articulation agreements. According to the director, a good working relationship with Eastern Arizona Community College has developed. They provide meeting facilities and a site coordinator within the college who assisted with the Career Expo and Groundhog Job Shadow Day. In a pilot project, college students present Career Pathway information to high school students. Articulation agreements have been facilitated, in large, through Tech Prep.

Universal Access:
School Participation and Roll-out Strategy

For FY 1998-99, each partnership identified the "active" schools within their region. "Active" schools are defined as those which formally partner with the regional STW partnership and which involve at least some of their students in STW activities as described on the national *Progress Measures* (see Appendix A).

Eastern Arizona STW Partnership reported that 87% of all public schools were "active" participants as of March 1999. "Active" schools are summarized in Table 2.

The roll-out strategy adopted in the previous year continues in force. The coordinators are charged with involving local schools in their areas. However, the director anticipates that as federal funding is reduced, the distribution of resources will have to consider districts' level of participation in order to maximize the impact of funds.

Table 2
"Active" School Participation for the Eastern Arizona STW Partnership

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active" Schools (FY 1998-99)					
	E/J	M/J	J/S	K-12	Total	E/J	M/J	J/S	K-12	# Total	% Total
Blue ESD	1				1					0	0
Bonita ESD	1				1	1				1	100
Clifton USD	1		1		2	1		1		2	100
Dan Hinton School				1	1					0	0
Duncan USD	2			1	3	2			1	3	100
Ft. Thomas USD	1		1		2	1		1		2	100
Globe USD	2	1	1		4	2	1	1		4	100
Greenlee Accom.			1	1	2					0	0
Hayden Windelman USD	2	1	1		4	2	1	1		4	100
Miami USD	3	1	1		5	3	1	1		5	100
Morenci USD	1		1		2	1		1		2	100
Payson USD	3	1	1		5	3	1	1		5	100
Pima USD	1		1		2	1		1		2	100
Pine Strawberry ESD	1				1	1				1	100
Safford USD	2	1	2		5	2	1	2		5	100
San Carlos USD	1	1	1		3	1	1	1		3	100
Solomonville ESD	1				1	1				1	100
Thatcher USD	2	1	1		4	2	1	1		4	100
Tonto Basin ESD	1				1	1				1	100
Young ESD	1		1		2	1		1		2	100
Charter Schools	2		2		4			1		1	25
TOTAL PUBLIC SCHOOLS	29	7	16	3	55	26	7	14	1	48	87

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

Table 3 describes school participation in the partnership, according to the state's "Level of Involvement" (LOI) survey conducted in spring 1998. The LOI survey describes school involvement in STW. This survey was used at the partnership level to help plan technical assistance and roll-out strategies and provides a state-wide indicator of systems change. The survey, designed by a team of regional evaluators, incorporated concepts from the national *Progress Measures* survey. Areas measured include: depth of school participation in terms of the student population served and the degree to which STW concepts are institutionalized in the school; curriculum, assessment, and instructional practices; level of business involvement and relationship to GSPED cluster industries; and affiliation with the local/regional partnership.

Forty-two active schools provided information concerning the level of involvement through the 1998 survey. When asked to describe how the school was associated with the partnership, the greatest share (83%) said that they received technical assistance. Over half reported receiving funding (55%), and a smaller share (45%) said that they participate in local/regional STW planning.

Table 3
Type of Active School Participation: Eastern Arizona STW Partnership

Level of Involvement School Survey-Spring 98	Active Schools			
	Partnership		State	
	N	%	N	%
Participate in local/regional STW planning	19	45%	140	50%
Receive technical assistance	35	83%	203	73%
Receive funding	23	55%	135	48%
Other unspecified	2	5%	23	8%
Total that responded to this question*	42	100%	280	100%

* May be counted in more than one category

Integration with One-Stop Career Centers

The One-Stop Career Center is not fully operational, according to the director. The previous director had initiated contact with key personnel. Since then, the partners have been waiting for the One-Stop's computer system to be "up and running." STW materials are being provided for distribution at the One-Stop satellite sites.

Targeted Access for Special Populations

The partnership has focused efforts on inclusion of special education students and at-risk students served in charter schools. The director is a member of the Graham County Special Education Transition Team. The partnership sponsored training on transition issues. In addition, a new transition manual is being developed with partnership support. Some schools have targeted STW activities to special needs students. For example, Safford High School special education students run a school-based ceramics enterprise. The Payson Center for Success, a charter school, serves several at-risk students. Frontier Elementary School offers real work experience for Emotionally Handicapped students through the "Wolf Express" delivery service. The director expects site coordinators will identify gifted and talented programs which could benefit from technical assistance next year.

STW Elementary, Middle, High School, Postsecondary Initiatives

Overall, the partnership has supported the development of STW at all grade levels through Groundhog Job Shadow Day. Over 727 students and 300 businesses, government agencies, and other organizations participated in the shadowing experience. They have also provided training, a business directory, and supported several regional events.

Table 4 shows the results of the level of involvement survey conducted in spring 1998. Forty-eight active schools responded to the survey. Overall, 73% of active schools offered STW activities on at least a monthly schedule and 87% of schools involved at least half of their students during the year in STW activities. This 87% compares favorably to the state as a whole (81%). However, a relatively smaller share of schools offer school-wide activities or institutionalized activities (19%) compared to the state as a

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whole (29%). Furthermore, the percent of activities used (63%) is less than that for the state (70%) and the mean level of business involvement (1.2) is less than the state average of 1.4.

Table 4
Level of Involvement Survey Spring 1998: Eastern Arizona STW Partnership Active Schools

	Elementary		Middle/Junior High		High School		Total	
Indicators	Partnership	State	Partnership	State	Partnership	State	Partnership	State
Percent of schools with activities at least monthly	65%	62%	71%	75%	93%	85%	73%	70%
Percent of activities used	65%	68%	55%	75%	65%	73%	63%	70%
Percent of schools with at least 50% of students participating	88%	79%	86%	79%	86%	88%	87%	81%
Percent of schools with school-wide or institutionalized activities	15%	21%	33%	39%	21%	43%	19%	29%
Mean level of business involvement (1-3)	1.2	1.3	1.1	1.4	1.4	1.5	1.2	1.4

Elementary

Nearly all elementary schools were defined as active. A program at Frontier Elementary School in Payson was observed during the site visit. The teacher for the Emotionally Handicapped students described a school-based enterprise that has been very successful for her students. The class runs a delivery service for school staff three times a week. Students collect requests and then travel throughout the community to fulfill them. There is a nominal delivery fee requested. Students learn socialization, workplace skills, and reinforce academic skills. Requests range from purchasing materials at a store to conducting business at a bank. As evidence of the program's success, a student (described as previously introverted and shy) introduced herself and explained that she had learned a lot from working in the delivery business. Other elementary programs include field trips for the Phelps Dodge Morenci Mine and a career fair at Lafe Nelson Elementary School in Safford. Bonita Elementary students established a publishing company.

Overall 65% of the elementary schools who participated in the LOI survey in spring 1998 reported monthly activities and 88% said that at least half of their students participated. This is 9% more than the partnership as a whole. Relatively few schools reported school-wide or institutionalized activities.

Twenty-five elementary schools provided details about the types of activities in the LOI survey. All schools reported guest speakers. Field trips and class projects were used by at least 84% of the schools. More than half reported curriculum development (65%) and computer-assisted career exploration (56%). One third of schools have career fairs.

Middle/Junior High

All middle schools were reported to be active in the partnership. Middle schools have been involved in a variety of activities according to the director. For example, Safford Middle Schools have a student-run store. Pima School District eighth grade students learn about resume writing in the business classes. Career Awareness Camps are the main initiative sponsored by the partnership. Six camps were held in five locations involving more than 100 students. Seven middle schools provided information on the LOI survey in spring 1998. At least five schools reported career guest speakers, field trips, class projects with

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careers, and career inventories. Four schools reported career fairs and curriculum development activities. Three schools reported job shadowing, school-based enterprises, or computer-assisted career exploration and two offered career mentoring.

High School

Students at the Payson Center for Success were observed during the site visit. The charter school offers individualized training for students in an alternative setting. The school is run like a business. Students are expected to demonstrate workplace skills and receive computer-based instruction. Students are placed in a 60-hour internship as a part of their course requirements. Each student takes a career inventory and participates in career awareness activities and field trips. The alternative setting has proven to be helpful for many students who were not successful in a traditional high school and were at risk of dropping out of school.

According to the director, many activities at the high school level are the result of existing vocational programs. The LOI survey shows that nearly all high schools (93%) have activities at least monthly. This is a greater share of schools than for the partnership overall (73%). Moreover, 86% of the high schools involve at least half of the students. However, few of these high schools have institutionalized such activities school-wide (21%).

Guest speakers were reported by all schools. Nearly 90% use field trips to explore careers. Eleven schools used computer-assisted career exploration. Ten (71%) reported class projects and career fairs. Only eight schools (57%) reported career inventories, mentoring or job shadowing.

Career Counseling

A regional Counselor's Academy is being planned in conjunction with the Arizona Department of Education, Tech Prep and Eastern Arizona College. The partnership encourages districts to adopt the Comprehensive Competency-Based Guidance (CCBG) model. A joint planning effort to prepare a standard Career Pathways portfolio is underway among counselors in Graham, Greenlee, and Gila Counties.

Goal 3: Technical Assistance

Ongoing Needs Assessment

A needs assessment is being conducted every time there is a site coordinator meeting. Coordinators bring school needs to the attention of the partnership staff. For example, many are indicating that there is a need for elementary curriculum.

Curriculum/Assessment Initiatives
(Including Career Pathways, *K-12 Workplace Skills*, applied/contextual curriculum)

For the most part, the partnership acts as a clearinghouse to answer requests for curriculum and assessment models and materials. For example, the Fort Thomas Elementary school has written some STW curriculum which has been distributed to schools through the partnership.

Professional Development Initiatives
(Including business and educators)

The partnership offered the *STW— It's Elementary* workshop to several schools. A "multiple intelligence" workshop for teachers was sponsored by the partnership. The counselor's mini-academy is budgeted. The Arizona Mining Association has been involved in training teachers about the industry. There is no formal training for business partners currently offered.

Other Technical Assistance Activities

The San Carlos and Fort Thomas Indian communities are both active in the partnership. The partnership plans to sponsor three educators to attend the Second Annual Native American STW Conference. Activities at San Carlos include job shadowing and a summer career awareness camp.

Goal 4: Community Involvement
(Including employers and the community-at-large)

Business involvement has been encouraged through attendance at meetings and including businesses in STW planning. For example, the Chamber of Commerce in Payson is familiar with GSPED and active in STW. Graham County had an economic development summit that the director attended. Globe also has an active Chamber. Business people are a part of the local governance structure and businesses are being approached about increasing their level of involvement in the partnership.

Parents and grandparents are encouraged to participate through career presentations at the schools.

Goal 5: Public Awareness

For the period July through December 1998, there were 38 presentations and seven direct mailings, as well as one radio spot and 27 newspaper articles. The partnership estimates that they made 1,507 student contacts, 220 parent contacts, 848 teacher contacts, 26 counselor contacts, 28 school administrator contacts, 689 business and industry contacts and 1,722 general contacts for a total of 5,040 contacts through either direct mail or presentations.

The partnership distributes brochures and informational packets throughout the partnership. Site coordinators are responsible for submitting news articles to their local newspapers. Other strategies that have been successful are informational programs at service clubs and community groups and word-of-mouth.

Goal 6: System Evaluation

The partnership participated in state and national evaluation activities during the year. In addition, a survey on school-based enterprises has been conducted. A student career employment survey was conducted in the fall. The survey asked whether a student worked during the summer and how they found out about the job. The director said that there was little correlation between where students work and where they would like to work in the future. The coordinators will be given the opportunity to use the information to help plan to make work experiences meaningful for students.

Discussion

Partnership Assets

The Eastern Arizona STW Partnership has grown during the year. The structure is in place to support the proliferation of STW in local schools. The decentralized planning structure helps to build local buy-in. Furthermore, the use of site coordinators to encourage school participation seems to be making a difference, according to the director. Chambers of Commerce are more active and the Mining Association is promoting activities for students.

The director credits the summer career camps and job shadowing as making the biggest impact across the partnership. Due to monthly reporting, an inventory of activities occurring within local schools is being built. According to the LOI survey, a relatively larger share of schools offer services to more than half of the students.

Partnership Challenges

The partnership has had several changes in governance which delayed the accomplishment of objectives in previous years. The share of schools with institutionalized or school-wide activities is less than for the state overall and the range of STW activities offered to students, especially at the elementary level, also is below state averages. Therefore, increasing the depth and breadth of activities will be a challenge.

Sustaining current efforts is also a challenge in light of diminished federal funding. A process will be needed to define the optimal allocation of funds based on successful practices.

The distancing by Tech Prep from STW also has been a disadvantage for the partnership.

Summary and Suggestions

The partnership should continue to evaluate funding based upon successful practices. Encouraging in-kind funding and soliciting participation of other partners could also help with continuation of partnership-wide events.

The coordinators should be given training as appropriate and encouraged to share best practices. The network may leverage the efforts of individual teachers. Furthermore, the coordinators could use the information that they are reporting and collecting to document partnership efforts and to provide evidence to their respective school districts of STW's results.

Schools should also share their best practices with the other state partnerships and use the information from schools throughout the state via Arizona's 5-Star Outstanding Practices. Recognition of the programs that are effective may help to sustain them.

Mohave Workforce Development Partnership

Site Visit: March 31, 1999

Region Served: Mohave County extends 13,312 square miles in northeastern Arizona.

FY 1995-96 funding:	$ 62,800
FY 1996-97 funding:	354,673
FY 1997-98 funding:	217,350
FY 1998-99 funding:	193,015
Total investment to date:	$827,838

School Profile

The Partnership serves students in 17 school districts including ten elementary, five unified, and two high school districts. Charter and private schools also are represented in the area.

In total for the 1998-99 school year, the Mohave Workforce Development Partnership included 53 public and 11 private schools enrolling more than 23,000 students in grades pre-kindergarten through 12 as shown in Table 1.

Table 1
Total Student Enrollment for the Mohave Workforce Development Partnership (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)*
Grades Pre-K through 6	13,621
Grades 7 through 8	3,737
Grades 9 through 12	6,079
Ungraded Elementary (K-8)	35
Ungraded Secondary (9-12)	0
TOTAL	23,472

*Note: Enrollment data reflect 51 schools for which data were available of the 53 public schools identified in this partnership.

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

The partnership is comprised of four unique regions. Public sector employment and small business are key to the economy of the northern section of the partnership, "the Arizona Strip." The Kingman area also has manufacturing including North Star Steel and the traditional trades. Lake Havasu City industries include three major boat manufacturers and an optics plant. Bullhead City and the surrounding area is a tourist destination with many hospitality related businesses.

Goal 1: System Governance and Partnership Development

Partnership Governance and Staff

The Mohave partnership continues to be governed by four regional governing boards (Lake Havasu City, Kingman, Mohave Valley/Bullhead City, the Arizona Strip) and a combined board for the partnership-at-large. The larger board has 40 members and membership fluctuates. The core participants are consistent;

however, many business people are involved periodically due to the demands of their businesses. Regional governing boards meet monthly and are engaged in planning and promoting School To Work (STW) within their communities. Membership includes businesses, community agencies, and educational entities within each region.

The partnership is staffed by a director. Marketing and evaluation tasks are contracted as needed. However, due to reduced federal funding, costs for administration and partnership staff have been reduced when possible.

The partnership has placed site coordinators in schools. The site coordinators receive a small stipend for helping the schools implement STW practices. Approximately 41 schools have a site coordinator. The partnership director described the site coordinators as very effective in building local participation, gathering and sharing information, and coordinating activities between districts. Coordinator meetings are held quarterly in Kingman and Lake Havasu and monthly in Bullhead City.

A business coordinator has been in place in Lake Havasu for three years. A business coordinator has recently been placed in Kingman. The business coordinator has helped provide professional development for educators and is starting a career mentoring program for students. The director stated that the business coordinator has been very effective in advancing STW.

Sustainability

The partnership has many elements that will sustain themselves. However, the director does not envision that county-wide partnership will be maintained. The director predicts that, within each region, the boards that are now active will probably continue due to their level of engagement. The oversight board also may continue in a streamlined format. Coordinators will probably continue to be involved in the school improvement process after the stipends are gone. Furthermore, according to the director, certain practices and events which have become a part of the normal school process or have been adopted by community groups will most likely continue. For example, Groundhog Job Shadow Day has been adopted by some schools as a school initiative. The director points to increased local ownership of STW as evidence that activities will be sustained.

Goal 2: Program Coordination and Integration

Program Coordination and Integration

Program coordination is encouraged through the participation of vocational and other programs at the local community level. Although Tech Prep continues to distance themselves from STW, a number of community agencies and educational partners participate in planning and delivering STW to students.

The director described Career Pathways as one of the basic organizing principles of STW and implementation is continuing to grow. For example, the college fairs are organized by Pathways. High schools students receive a list of participating businesses with jobs in the Pathways. Activities, career panels, and interviews are similarly structured. All high school catalogs contain information about Pathways, as well.

The director indicates that ties with higher education continue to be positive. The community college continues to offer a career fair and also participated in job shadowing.

Universal Access:
School Participation and Roll-out Strategy

For FY 1998-99, data were collected from each partnership regarding the status of schools considered to be "active" within their region. "Active" schools are defined as those which formally partner with the regional STW partnership and which involve at least some of their students in STW activities as described on the national Progress Measures (see Appendix A). The Mohave Workforce Development Partnership reported that 85% of all public schools were "active" participants as of March 1999. "Active" schools are summarized in Table 2.

Table 2
"Active" School Participation for the Mohave Workforce Development Partnership

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active" Schools (FY 1998-99)					
	E/J	M/J	J/S	K-12	Total	E/J	M/J	J/S	K-12	# Total	% Total
Bullhead City ESD	3	2			5	3	2			5	100
Bullhead City USD	1				1	1				1	100
Chloride ESD	1				1					0	0
Colorado City Unified	1	1	1		3	1	1	1		3	100
Colorado River UHSD			2		2			2		2	100
Fredonia-Moccasin Unified	2		1		3	2		1		3	100
Hackberry ESD	1				1	1				1	100
Kingman ESD	6	1			7	3	1			4	57
Lake Havasu Unified	5	2	1		8	5	2	1		8	100
Littlefield ESD	1				1					0	0
Mohave UHSD			3		3	3		3		3	100
Mohave Valley SD #16	3	1			4	3	1			4	100
Owens Whitney ESD	1				1					0	0
Peach Springs Unified				1	1				1	1	100
Topock ESD	1				1	1				1	100
Valentine ESD	1				1	1				1	100
Yucca ESD	1				1					0	0
Charter Schools	3	2	3	1	9	2	2	3	1	8	89
TOTAL PUBLIC SCHOOLS	31	9	11	2	53	23	9	11	2	45	85
Private Schools	6			5	11					0	0
TOTAL	37	9	11	7	64	23	9	11	2	45	70

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels
"Active" schools are defined as those which formally partner with the regional STW partnership and which involve at least some of their students in School To Work activities as described on the national Progress Measures.

Table 3 describes school participation in the partnership, according to the state's "Level of Involvement" LOI survey conducted in spring 1998. The LOI survey describes school involvement in STW and was used at the partnership level to help plan technical assistance and roll-out strategies as well as to provide a statewide indicator of systems change. The survey, designed by a team of regional evaluators, incorporated concepts from the national *Progress Measures* survey. Areas measured include: depth of school participation in terms of the student population served and the degree to which STW concepts are institutionalized in the school;

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curriculum, assessment, and instructional practices; level of business involvement and relationship to GSPED cluster industries; and affiliation with the local/regional partnership.

Forty-two active schools provided information concerning their level of involvement through the 1998 survey. When asked to describe how the school was associated with the partnership, the greatest share (91%) said that they received technical assistance. More than half reported receiving funding (57%) and 60 percent said that they participate in local/regional STW planning. In all cases, the share of schools reporting these relationships with the partnership is higher than reported for the state as a whole.

Table 3
Type of Active School Participation: Mohave Workforce Development Partnership

Level of Involvement School Survey-Spring 98	Active Schools			
	Partnership		State	
	N	%	N	%
Participate in local/regional STW planning	21	60%	140	50%
Receive technical assistance	32	91%	203	73%
Receive funding	20	57%	135	48%
Other unspecified	1	3%	23	8%
Total that responded to this question*	35	100%	280	100%

* May be counted in more than one category

Integration with One-Stop Career Centers

The director indicated that the relationships with the Job Training Partnership Act (JTPA) has grown. Both JTPA and STW are helping to plan a new charter school for the Lake Havasu region which will incorporate internships and other STW elements. The Arizona Department of Economic Security (DES) continues to be a planning partner. Representatives from the agency, which sponsors the One-Stop Career Center, continue to be active on local STW boards. Partnership staff attend workforce and economic development meetings in the Kingman area.

Targeted Access for Special Populations

The director indicated that the Youth Transition Project in Bullhead is a model of STW integration. Students are involved in a number of enterprises including the "BOSS program" and a student-run retail business at the airport. They have a retail clerks apprenticeship and are developing a health services apprenticeship. The development of the apprenticeship program in Bullhead is significant in that it is federally-approved and that apprenticeship programs are one of the least developed options for students. New ideas are being developed including a Bee-Haven project.

STW Elementary, Middle, High School, Postsecondary Initiatives

The director described the variety of activities occurring in the partnership. She believes that many schools have adopted STW as a part of their own curriculum. The director feels that more schools offer

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work-related experiences for students and teachers recognize the importance of career awareness and exploration.

Table 4 highlights results of the state's LOI survey conducted in spring 1998. Overall, according to the survey, nearly nine of every ten (89%) active Mohave Partnership schools involve at least half of their students in STW activities during the year. More than one third of schools (36%) conduct school-wide or institutionalized activities. Furthermore, the range of activities (i.e., percent of activities used) is higher in Mohave (76%) than for the state overall (70%).

Table 4
Level of Involvement Survey Spring 1998: Mohave Workforce Development Partnership Active Schools

	Elementary		Middle/Junior High		High School		Total	
Indicators	Partnership	State	Partnership	State	Partnership	State	Partnership	State
Percent of schools with activities at least monthly	68%	62%	83%	75%	82%	85%	75%	70%
Percent of activities used	77%	68%	82%	75%	73%	73%	76%	70%
Percent of schools with at least 50% of students participating	84%	79%	100%	79%	91%	88%	89%	81%
Percent of schools with school-wide or institutionalized activities	21%	21%	33%	39%	64%	43%	36%	29%
Mean level of business involvement (1-3)	1.3	1.3	1.2	1.4	1.7	1.5	1.4	1.4

Elementary

According to the LOI survey, a greater share of Mohave elementary schools report monthly activities and participation of at least half of their students than the partnerships as a whole. Similar to other partnerships, fewest schools report school-wide activities. Most often reported activities included career guest speakers, field trips, class projects, staff training and curriculum development. Very few schools reported career inventories, school-based enterprises or computer-assisted career exploration. Seven programs were recognized as Arizona 5-Star Outstanding Practices as of February, 1999. The director also noted that, recently, one school successfully started a school-based enterprise by shifting the responsibility for the development and production of their school yearbook to students.

Middle/Junior High

Daytona Middle School was observed during the visit. The school was formed based upon the Microsociety concept. The Microsociety is conducted school-wide in the afternoon. Each student is a part of a production team that serves a function in the community and is then compensated for his or her service by a salary.

One of the groups is the bank. The students count their simulated currency and keep the books to pay and collect taxes from other students. Students have their own check books to purchase things from one another on market day. Many of the classrooms are creating wares to sell to one another. Some students were observed creating decorative boxes, wind chimes, door stops, key chains, or other products to sell. Other students were painting. Some were enforcing the rules.

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The students have a court room where student disputes are resolved and students act as lawyers, jurors, judges, plaintiffs, or defendants. Students also have the right to sue one another, as well as respond to tickets issued by security for infractions of community rules. The school has just begun, but is well into implementation of the Microsociety. Most parents liked the idea once it was explained to them. Furthermore, many local businesses have donated materials or assistance in helping the student-based enterprises get off the ground. STW was instrumental in helping sponsor some of the initial training which led to the creation of the school.

In the LOI survey, the middle/junior high schools were highly engaged (see Table 4). For example, percentages of Mohave middle/junior high schools are higher than for the state as a whole with respect to offering activities at least monthly, the percent of activities used, and the percent of schools with at least half of the students participating. One school had received recognition as one of Arizona's 5-Star Outstanding Practices.

High School

Lake Havasu High School's Career Center was observed as a part of the site observation. The purpose of the center is "to provide students as much information as possible to help bridge the gap between high school and post high school plans." Nearly all of the students in the school have used the center for job shadowing, student tutoring, listening to career speakers, learning about Career Pathways, attending college representative meetings, learning about community scholarships, or getting information about post-secondary institutions. The center is staffed by a career specialist who helps coordinate work-based experiences for students, coordinates events, helps students with career planning and assessment, and works with academic teachers to improve career education in the school. She published and distributes a newsletter about career awareness activities throughout the school.

The center is a large building in the middle of the school campus. The Career Center has grown in three years from one part of a small room to the facility that it is today. One end of the building houses a career resource center. The Career Center has printed materials, computers and files of student career portfolios. Several students were using the computers and several students were meeting with military recruiters at one small table in the center. A bulletin board listed job shadowing opportunities and a variety of career development activities. Offices in the central part of the building provide one-on-one counseling and tutoring to students. Students are also given the opportunity to tutor one another at the center. A career presentation classroom is located at the other end of the building. A presentation by the fire service began during the visit. Students had to sign up ahead of time and then were released from their classes to attend the presentation. A woman firefighter discussed the variety of careers in the fire service. Representatives from the community college also were present to discuss courses offered in the field. The guidance department is located in another part of the school, but complements the center activities.

According to the LOI survey, Mohave high schools were very active (see Table 4). Notable is the fact that over two-thirds of the highs schools (64%) report offering school-wide activities or having institutionalized activities. Moreover, these schools' mean level of business involvement (1.7) represents the highest level of business involvement among all of Mohave's schools, and exceeds the state average (1.5). Some 15 STW projects were recognized as Arizona 5-Star Outstanding Practices.

Career Counseling

The director feels that the development and distribution of career portfolios for students is a significant accomplishment of the partnership. Businesses participated in defining what information was most important to them. The counselors from all school districts, educators, and businesses all helped to

design and implement the portfolio. The Chamber of Commerce in Kingman endorses the portfolio and has started to educate businesses about using the portfolio as one tool to evaluate students as employees.

Goal 3: Technical Assistance

Ongoing Needs Assessment

Needs assessment is conducted as a part of the local and regional governance meetings. The coordinators also provide input and collect information for partnership use. Furthermore, detailed program information has been collected as a part of the process underlying Arizona's 5-Star Outstanding Practices.

Curriculum/Assessment Initiatives
(Including Career Pathways, *K-12 Workplace Skills*, applied/contextual curriculum)

The partnership has emphasized supporting *K-12 Workplace Skills* and Career Pathways in the classroom. Teachers who participate in job shadowing are required to create curriculum for use in the classroom. Comprehensive Competency-Based Guidance (CCBG) curriculum materials have been purchased and distributed to all schools, as well.

The "5-Star" practices are being actively promoted through the distribution of materials and through continued nominations of promising programs.

Professional Development Initiatives
(Including business and educators)

Teacher internships are supported through the partnership "Educators in the Workplace" program. According to the director, encouraging dialog between educators and businesses is one of the most important partnership efforts. The partnership hopes to help educators understand the economic base of their communities and the relevance of this to the classroom. According to the director, the partnership also hopes to increase educator awareness of business needs. Other professional development opportunities include county-wide inservice workshops and CCBG training.

Goal 4: Community Involvement
(Including employers and the community-at-large)

The business coordinators are charged with engaging employers in STW. They also help find places for students to mentor or shadow. A business database has been created in Kingman, Bullhead and Lake Havasu. A survey of businesses conducted by the Chamber of Commerce in Kingman is being designed to include Career Pathways and GSPED questions.

Goal 5: Public Awareness

For the period July through December 1998, there were ten presentations and 11 direct mailings, as well as two television spots and 59 newspaper articles. The partnership estimates that they made 770 student contacts, 790 parent contacts, 730 teacher contacts, six school administrator contacts, 1,884 business and industry contacts, and 312 general contacts for a total of 4,492 contacts through either direct mail or presentations. There was wide-spread communication about Groundhog Job Shadow Day that helped make it effective.

According to the director, the Eight Keys to Employability poster was quite popular with businesses. The development and distribution of certificates of appreciation is a new strategy to further build public awareness. Teachers are encouraged to recognize their business partners on an on-going basis.

Goal 6: System Evaluation

The partnership continues to meet the state and federal evaluation requirements. They have also developed a streamlined process for gathering information from the schools and use the site coordinators to help facilitate data collection.

Discussion

Partnership Assets

The partnership continues to be effective in involving local communities and is building sustainable strategies at the local level. The growth of participation and the coordination of activities across districts and grade levels has been significant, according to the director. She also highlights the development of internships and the services provided through the Youth Transition Program for special needs students. In terms of technical assistance, the director highlights the Teachers in the Workplace initiative and the CCBG workshops for teachers. She feels that the most useful tools to encourage connections with the workplace are the certificates of appreciation and the use of business directories. The partnership has also been more involved in planning in conjunction with economic development and business entities.

Partnership Challenges

The challenges that the partnership faces include the need to continue to develop sustainable strategies. In the absence of the partnership umbrella, it will be difficult to build linkages across districts and grade levels. Furthermore, the extent that communities can support one another is at least partially dependent on a structure of support. Service to more remote areas is also a challenge due to the distances and the differences in the economic base of participating communities.

Summary and Suggestions

The partnership should seek out other partners who would be willing to continue the efforts that have been supported by STW. Maintenance of the business database may, for example, be a useful tool for a district to adopt. Furthermore, identification and inclusion of local decision-makers in the transition planning process would be helpful.

The promotion and distribution of Arizona's 5-Star Outstanding Practices is valuable and should continue to be emphasized. Establishing a network for continuation of dialog and sharing between teachers would be valuable. For example, the Lake Havasu High School Career Center is a model for other schools and districts. Key staff from the school may be able to help create or continue a clearinghouse which other schools could use.

The allocation of STW funds should emphasize self-sustaining projects and those which are enduring. The teacher internships seem to offer promise for continued curriculum development and partnering with business.

Northeastern Arizona Native American STW Partnership

Site Visit: March 15, 1999

Region Served: The Northeastern Arizona Native American School To Work (STW) Partnership (NEAZNAS) is located in the northeastern corner of the state. The partnership serves the Navajo and Hopi Indian reservations and includes portions of Coconino, Navajo, and Apache Counties.

FY 1995-96 funding:	$ 51,237
FY 1997-98 funding:	210,384
FY 1998-99 funding:	170,271
Total investment to date:	$431,892

School Profile

The NEAZNAS Partnership serves students in public school districts as well as charter, contract, private, and Bureau of Indian Affairs (BIA) schools. The table below shows the public school enrollment for the partnership.

Table 1
Total Student Enrollment for the NEAZNAS Partnership (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)*
Grades Pre-K through 6	9,877
Grades 7 through 8	3,138
Grades 9 through 12	5,993
Ungraded Elementary (K-8)	10
Ungraded Secondary (9-12)	1
TOTAL	19,019

*Note: Enrollment data reflect 36 schools for which data were available of the 41 public schools identified in this partnership.

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

Employment opportunities are limited due to the remote rural nature of this partnership. Public sector employers include tribal, federal and county governments. Utilities and the National Park Service are large employers. The Grand Canyon is a major tourist attraction which borders the partnership area. Peabody Coal, a large mining company, is a prominent employer representing the GSPED cluster of Minerals and Mining. Other GSPED cluster industries include businesses in Food, Fiber and Natural Products and Tourism. Unemployment rates are high and there are relatively few large employers.

Goal 1: System Governance and Partnership Development

Partnership Governance and Staff

The partnership is governed by a governing committee, an executive committee, local STW advisory councils, liaisons, and partnership staff. The governing committee oversees the implementation of STW

through two funding sources: the State STW contract and a direct federal Urban/Rural Opportunities Grant (UROG). The Arizona State funds are focused on serving primarily students in K-8, while the federal grant money is allocated to grades 9-12. The goal of the board is to coordinate these two separate efforts to serve all students in the region.

Two voting representatives from each local STW advisory council and a non-voting representative from each school district and post-secondary educational institution sit on the governing committee. According to the director, the board membership has remained stable and quarterly meetings are rotated between communities.

The NEAZNAS partnership governing committee has oversight responsibilities for the partnership activities. They are responsible for establishing the budgets, approving major expenditures (including mini-grant funds), and hiring key personnel. During the past year the board has clarified its role through board training. The board also has begun to conduct strategic planning and to discuss sustainability. According to the director, this has been productive and has helped focus on "big picture" issues.

Each partnership region has a site-based advisory board. Within each region, site facilitators are the points-of-contact for the public school districts, BIA schools, and other schools. Liaisons, partnership staff, and the executive committee meet monthly to coordinate and share activities. Site facilitators receive stipends through the direct federal STW grant. Each district can allocate resources for facilitators according to their need. The partnership is encouraging placing liaisons at both the feeder schools and the high school.

The partnership staff includes a director, a contracted evaluator, contracted marketing person (on an "as-needed" basis), and a part-time secretary. Providing technical assistance and gathering baseline data has been emphasized this year. According to the director, staff have worked well together to develop good working relationships with all system participants.

Sustainability

According to the director, the partnership has several strategies to sustain STW within schools. The partnership is trying to expand the number of participating schools and the depth of their involvement. Liaisons are coordinating activities with feeder schools within local districts. At the district level, the partnership staff and board are involving superintendents and schools boards to promote STW as a part of the on-going school curriculum. On a larger scale, alliances with Navajo STW grantees in Utah and New Mexico, and possibly other tribes, are being pursued. A joint committee has met to discuss the feasibility of establishing a non-profit entity and seeking additional grant funding for STW activities. The director for the Pima County STW Partnership has shared the process by which the Pima partnership formed a 501(c)(3) corporation.

The director believes that STW activities will continue in some schools. There are a number of very successful programs and schools that have an integrated approach to STW that will continue regardless of funding. The structure of the current partnership is dependent upon new funding sources.

Goal 2: Program Coordination and Integration

Program Coordination and Integration

Integration with Tech Prep and vocational programs continues by virtue of staff participation on the governing board and as liaisons within the schools. The partnership's current federal director (and

previous state director) is a board member of the Coconino County Tech Prep Consortia. Furthermore, many activities are co-sponsored by Tech Prep and STW. Within individual districts, program coordination has been accomplished to varying degrees. The Ganado schools are one model of an integrated system which has institutionalized STW into their curriculum.

The Arizona Department of Education's Career Pathways model has been promoted by the partnership. Training and support is a part of most meetings and has been introduced at many partnership schools. Seven of eight schools providing information in spring 1998 indicated that at least some activities were organized around Career Pathways.

Coordination with higher education has grown during the year, according to the director. The Center for Workforce Development at Northern Arizona University is represented on the board. They have provided technical assistance to the partnership and they sponsor several programs serving Native American students. The Hospitality program and the School of Business at Northern Arizona University (NAU) also provide services to students. Other alliances involve Northland Pioneer College and Diné Community College. Dual credit agreements are continuing to be developed with the community colleges.

Universal Access:
School Participation and Roll-out Strategy

For FY 1998-99, data were collected from each partnership regarding the status of schools considered to be "active" within their region. "Active" schools are defined as those which formally partner with the regional STW partnership and which involve at least some of their students in STW activities as described on the national *Progress Measures* (see Appendix A).

As of March 1999, 90% of *public* schools were active and 88% of *all* schools were active, including BIA schools. This is significantly higher than the previous year, when data were under-reported. The partnership has completed a census of schools and designated a key contact in each area to help gather this information.

Furthermore, according to the director, new schools have been recruited. Liaisons have been responsible for outreach to non-participating schools and for mentoring all the feeder schools within their respective areas. Detailed information on active schools is provided in Table 2.

Table 3 details school participation in the partnership, according to the state's "Level of Involvement" (LOI) survey conducted in spring 1998. The LOI survey describes school involvement in STW and was used at the partnership level to help plan technical assistance and roll-out strategies as well as to provide a state-wide indicator of systems change. The survey, designed by a team of regional evaluators, incorporated concepts from the national *Progress Measures* survey. Areas measured include: depth of school participation in terms of the student population served and the degree to which STW concepts are institutionalized in the school; curriculum, assessment, and instructional practices; level of business involvement and relationship to GSPED cluster industries; and affiliation with the local/regional partnership.

Since public schools that are active were not well-defined in the previous year, all schools are included in Table 3. When asked to describe how the school is associated with the local/regional STW partnership, all schools (100%) said that they received funding, 80% said they participated in local or regional planning, and two-thirds (67%) reported receiving technical assistance.

Table 2
"Active" School Participation for the NEAZNAS Partnership

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active" Schools (FY 1998-99)					
	E/J	M/J	J/S	K-12	Total	E/J	M/J	J/S	K-12	# Total	% Total
Cedar	2				2	2				2	100
Chinle	5	1	1		7	5	1	1		7	100
Ganado	2	1	1		4	2	1	1		4	100
Kayenta	2	1	1		4	2	1	1		4	100
Pinon	2		1		3	2		1		3	100
Red Mesa	2	1	1		4					0	0
Tuba City	4	1	1		6	4	1	1		6	100
Window Rock	2	1	1		4	2	1	1		4	100
Charter Schools	4		1	1	6	4		1	1	6	100
TOTAL PUBLIC SCHOOLS	25	6	8	1	40	23	5	7	1	36	90
BIA	16	1	4	3	24	15	1	3	1	20	83
TOTAL	41	7	12	4	64	38	6	10	2	56	88

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

Table 3
Type of Active School Participation: NEAZNAS Partnership

Level of Involvement School Survey-Spring 98	All Schools	
	N	%
Participate in local/regional STW planning	12	80%
Receive technical assistance	10	67%
Receive funding	15	100%
Other unspecified	0	—
Total that responded to this question*	15	100%

* May be counted in more than one category

Integration with One-Stop Career Centers

There is no One-Stop Career Center being developed in the region, according to the director. The closest One-Stop is located in Flagstaff. However, the partnership and local schools coordinate with Job Training Partnership Act (JTPA) programs and with tribal and state Arizona Department of Economic Security (DES) offices in local communities. Some of the more remote areas can not easily access services. The director has actively pursued developing relationships with local tribal agencies and the Private Industry Council.

Targeted Access for Special Populations

Students with special needs are served by virtue of being mainstreamed into the school population. Many high schools previously have established programs for special needs students which have since been enhanced by STW. For example, special needs students at Greyhills Academy have work-based learning through their hospitality program. Other partnership-wide events (e.g., an equity conference at NAU; job fairs) are open to all students and, therefore, serve many students categorized as "special populations."

STW Elementary, Middle, High School, Postsecondary Initiatives

A wide variety of activities are occurring throughout the partnership, according to the director. Eleven K-8 activities have been supported with Arizona STW federal funds. Sites include Chinle Boarding School, Chinle Kindergarten Center, Chinle Primary School, Chinle Elementary School, Greasewood Community School, Tsaile Elementary School, Tuba City Boarding School, Little Singer Community School, Kaibeto Boarding School, and Shonto Preparatory School. The high schools are funded through the federal UROG. They are, with one exception, active in the partnership and collaborate to implement the system.

Table 4 provides detail from 19 schools which provided general information concerning their involvement in STW in the spring 1998 LOI survey. The 19 schools include both active and non-active schools since an accurate census of "active" schools was not available at the time. Overall, 90% of the schools that responded involve all of their students in some activity during the year. Fewer conduct activities on at least a monthly basis (83%) The smallest share of schools (42%) have institutionalized activities. Overall, high schools have the highest levels of involvement.

Schools were asked to report the types of activities that they provided in spring 1998. Nearly all of the 17 schools that responded to this section of the survey indicated that they sponsor class field trips (16), projects with careers (15), career inventories (14), or career guest speakers (14). Computer-assisted career exploration, school-based enterprises and career fairs also were reported by more than 65% of the schools.

The high schools also are working with various post-secondary institutions in reference to dual-crediting, career awareness, workshops and training. Gradually, post-secondary involvement is being pursued with the K-8 level, as well.

Table 4
Level of Involvement Survey Spring 1998: NEAZNAS Partnership Active Schools

	Elementary		Middle/Junior High		High School		Total	
Indicators	Partnership	State	Partnership	State	Partnership	State	Partnership	State
Percent of schools with activities at least monthly	73%	62%	50%	75%	100%	85%	83%	70%
Percent of activities used	73%	68%	86%	75%	91%	73%	77%	70%
Percent of schools with at least 50% of students participating	91%	79%	50%	79%	100%	88%	89%	81%
Percent of schools with school-wide or institutionalized activities	36%	21%	50%	39%	60%	43%	42%	29%
Mean level of business involvement (1-3)	1.3	1.3	1.4	1.4	1.3	1.5	1.2	1.4

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Elementary

Following Table 4, elementary schools are fairly involved in the NEAZNAS Partnership. Over nine in ten schools (91%) offer activities that serve at least half of their students, while over 70% of the schools offer activities monthly. Several sites were visited during the site visit that illustrate the extent of elementary schools' involvement in STW.

For example, Ganado Intermediate School (grades 3-5) was one site observed during the site visit. The counselor at the Ganado Intermediate School is the STW resource. The counselor has made himself available to teach classes and to support the classroom teacher with resources and expertise. He explained that a variety of activities are used throughout the school. Job-O-E interest inventories are given to students, and job shadowing has been encouraged including parental interviews. Students are bussed to the high school to see vocational classes. The district and the school are adopting a Comprehensive Competency-Based Guidance (CCBG) model.

Students in a fifth grade classroom shared their experiences with STW. The students have a mini-society within their classroom. They have developed their own products, "spirit sticks", and have done a variety of field trips to tie the "real world" to their classroom learning. One student displayed his spirit stick and explained various symbols and tokens that they had attached to represent their accomplishments. The teacher felt that this would be something that the class could sell to other schools and start a school-based enterprise. The students also discussed their mini-society. Each students applies for a position and then is hired. The project uses a token economy to reward participants. The class has also taken a number of field trips to expand their workplace skills and to increase their career awareness. Students described the field trip to the El Rancho motel and restaurant. The activity was tied to their math, writing, and life skills.

The Kindergarten center in Chinle also was visited. Students used manipulatives including puppets, Lego vehicles, and costumes to explore careers. The Primary school, which is located in an adjacent building, has a number of projects underway. The Community Helpers project provides career exploration activities in the Navajo language. Posters and books describe jobs in the Navajo community. Students also have field trips and guest speakers to discuss careers. Another classroom has a unit concerning the care of sheep, a traditional practice on the reservation. The entire school, which serves grades 1-3, has adopted the postal service program of a simulated post office. Mail is delivered to and from classrooms daily in this student-run business.

The intermediate school serves grades 4-6. A brief visit to the school revealed that many teachers are using STW in their classrooms. The counselor has resources and the library has a section on career exploration materials for use by all students. The librarian shared that guest speakers and career exploration presentations are also scheduled in the library. The entire school has a career fair every other year. In one classroom fourth and fifth grade students were preparing to take a field trip to an archeological site. They had been communicating with archeologists over the Internet and were combining academic subjects and career exploration activities. A math/science teacher explained how students in his class simulate a business experience and are required to build a bridge using toothpicks. As a lumber company, students were required to estimate materials, including land, and calculate the cost of their building as well as to design and build it. The students also have a variety of projects involving solar, wind, and kinetic-powered vehicles. The art teacher explained how careers in art are introduced as a part of her class. The language arts teacher also showed that career information is displayed predominantly in his room and is incorporated whenever possible.

Middle/Junior High

As shown in Table 4, at least half of the middle/junior high schools serving children in grades six or seven through eight report being involved in STW. However, the relative share of middle/junior high schools participating in STW in the NEAZNAS Partnership is lower than that for the state as a whole.

High School

This report does not focus on STW activities at the high school level, since these activities fall under the auspices of the direct federal UROG.

Career Counseling

The partnership sponsored a three-day Counselor's Academy at Chinle. With the success of this event last year, the partnership repeated the activity, this time broadening the scope to include teachers and other school personnel. The "Career Guidance Academy" was a joint effort of Northland and Coconino County Tech Prep and the Coconino County STW Partnership.

Goal 3: Technical Assistance

Ongoing Needs Assessment

The director and the evaluator have established a site visit schedule to obtain feedback from local liaisons. Once each semester, the director and evaluator meet with each site facilitator at each of the 12 sites to discuss their accomplishments relative to "Form 2" (i.e., part of the state contract). Partnership needs also are addressed during the monthly executive committee (site facilitator) meetings.

Curriculum/Assessment Initiatives (Including Career Pathways, *K-12 Workplace Skills*, applied/contextual curriculum)

The partnership has promoted the use of existing curricular models. Materials have been purchased and placed in libraries throughout the partnership. The partnership estimates that at least 65% of all K-8 schools will have a resource library by the end of the contract year. Greyhills has participated in a Career Pathways curriculum project and has developed a curriculum guide for Hospitality and Human Services pathways. A Career Pathways and *Workplace Skills* freshman curriculum developed at Greyhills has been shared with all partners. The director has introduced the GSPED wheel game developed by Yavapai STW to the facilitators and the board. The game helps schools identify clusters and understand the relationship between clusters and Career Pathways.

Professional Development Initiatives (Including business and educators)

Training and mentoring educators has been the responsibility of the liaisons. The director indicated that this strategy has been very successful. The liaisons have helped teachers apply for mini-grants and will be submitting nominations for Arizona's 5-Star Outstanding Practices. Some elementary schools have included workplace skills as a part of their inservice training. Other opportunities for training, such as the State Vocational Technology Conference, have been promoted by the partnership. The partnership also partnered with other organizations and sponsored the Career Guidance Academy for educators. Training has also been given to board members and the executive committee.

Goal 4: Community Involvement
(Including employers and the community-at-large)

The director has focused her activities in order to reach the greatest number of community members. She attends the quarterly agency meeting and is thereby able to contact 30-40 chapter representatives. The director also plans to attend regional superintendent or principal meetings to share information about STW.

Goal 5: Public Awareness

For the period July through December 1998, there were 11 presentations and five direct mailings, as well as two radio spots, two television spots, one magazine article and four newspaper articles. The partnership estimates that they made 303 student contacts, 574 parent contacts, eight teacher contacts, five school administrator contacts, 74 business and industry contacts and 2,437 general contacts for a total of 3,401 contacts through either direct mail or presentations.

The partnership developed a newsletter that will be distributed to schools. This will help communicate to teachers and parents all the activities that are going on in the partnership. The director has also sent out news releases and plans on preparing a radio ad in Navajo to spread the STW message. Newspaper coverage has generally been positive but varies by community.

Goal 6: System Evaluation

The partnership has emphasized evaluation during the year. The director and evaluator have conducted site evaluations and worked with site liaisons to make reporting easier and more timely. Site facilitators have responded to the requests for help with evaluation. Several needs assessments have been conducted and the results of the state instruments have been used to assess local needs. All federal and state requirements for evaluation were met during the year.

Discussion

Partnership Assets

The partnership has refined their governance structure and has streamlined and coordinated STW efforts between two funding sources. Board training has provided a framework for sustainability discussions and has clarified roles and responsibilities of board members, site coordinators and staff. The partnership structure includes the requisite staff to help develop and encourage partnership development.

The partnership is better able to collect and use data and to contribute to state systems building. The partnership has established benchmarks against which to measure progress.

A number of successful STW models have been implemented in the schools. In some schools, activities have been incorporated into the strategic plan for the district. In addition, school-based enterprises have been developed which are self-supporting.

Sustainability has been discussed in a global sense and has been encouraged through the emphasis on the role of site coordinators. Coordinators have accepted responsibility for increasing involvement in the elementary schools. The alliances with other STW states is promising.

Partnership Challenges

The partnership has relatively few business partners and is located in a rural remote area that lacks the infrastructure needed to support extensive economic development. The partnership schools are challenged to provide work-based opportunities for students due to distance and lack of employers.

The coordination of efforts is still difficult. Some projects, which are self-sufficient by virtue of separate funding sources, have little incentive to participate in county-wide planning. Pockets of activity are counter-productive to systems-building. Enlisting the full participation and support of tribal government is also a goal for the partnership.

Summary and Suggestions

The partnership should further develop their preliminary discussions about sustainability.

Distribution of funds should reflect the strategic direction that the partnership decides to adopt. Replication of projects which work and which do not require outside funding should be prioritized.

Setting up communications networks within the schools should be considered in addition to the newsletter. Seeking sponsors to continue to promote these networks would also be appropriate since funding and staff may not be available in the future.

Increasing the level of involvement of schools and encouraging more school participation is still important in the partnership. The partnership should capitalize on the momentum that they have built and aggressively promote STW activities in schools. To further this cause, schools should be encouraged to share their 5-Star Outstanding Practices with each other.

Northland STW Opportunities System

Site Visit: March 9, 1999

Region Served: Northeastern Arizona including Apache and Navajo Counties (excluding portions of the Navajo and Hopi reservations)

FY 1995-96 funding:	$ 48,015
FY 1996-97 funding:	394,051
FY 1997-98 funding:	254,808
FY 1998-99 funding:	221,105
Total investment to date:	$917,979

School Profile

The Northland School To Work (STW) Opportunities System serves Navajo and Apache Counties, excluding the Navajo and Hopi reservations where an allied STW program is being implemented. There are four elementary districts, 11 unified districts, charter schools and BIA schools within the partnership boundaries. The area is also served by several institutions of higher education including Northland Pioneer College (NPC).

In total for the 1998-99 school year, Northland's regional partnership included 65 schools enrolling more than 21,000 students in grades pre-kindergarten through 12 as shown in Table 1.

Table 1
Total Student Enrollment for the Northland STW System (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)*
Grades Pre-K through 6	11,008
Grades 7 through 8	3,562
Grades 9 through 12	6,123
Ungraded Elementary (K-8)	13
Ungraded Secondary (9-12)	394
TOTAL	21,100

*Note: Enrollment data reflect 57 schools for which data were available of the 61 public schools identified in this partnership.

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

The Northland STW Opportunities System serves a number of small communities in rural northeastern Arizona. The hospitality industry is a major employer since the area is a favorite vacation spot in both the summer and the winter. The population fluctuates due to these seasonal visitors. Public sector employers, Arizona Public Service, Salt River Project, Tucson Electric Power, Stone Container and Stone Forest Products are larger employers. The GSPED clusters that are represented in the partnership include: Tourism; Food, Fiber and Natural Products; and High Technology.

Goal 1: System Governance and Partnership Development

Partnership Governance and Staff

Key leadership components of the partnership continue to include an advisory board, staff and site coordinators. According to the director, the quarterly meeting of school and business representatives has been running smoothly throughout the year. Membership has been stable, participation has been consistent, and the business community is well represented. A school member and business member represent each school district on the board. The current school representatives also serve as vocational directors within their districts. Five site coordinators serve double duty as members of the advisory board. The site coordinators are always invited to attend the advisory board meeting. An executive committee is convened as needed.

The partnership staff has been working half-time during the past year to conserve money for districts. Contracted services for a webmaster and an evaluation specialist continued. Staff have been active in promoting STW, while shifting responsibility for many partnership activities to the coordinators and schools whenever possible. For example, the administration of the Occupational Information System (OIS) career interest inventories — originally contracted to the Arizona Department of Economic Security (DES) — has transitioned from partnership staff to school staff. Partnership staff and consultants work very closely together.

Coordinators continue to oversee the delivery of services in the local school districts. They meet monthly to plan activities across the partnership. Two new coordinators were added to the partnership during the past year: the Renaissance Academy and Joseph City Unified School District. The director indicated that this structure is most effective in insuring the requisite buy-in from local schools and in helping customize strategies in local districts. Coordinators frequently share ideas and resources to leverage their efforts.

The site visit included observation of the advisory board meeting held on March 9, 1999. Eleven of 20 advisory board members were in attendance. Four of those unable to attend were business representatives. Eight site coordinators, representatives from Northland Pioneer College, the Show Low Chamber of Commerce, Navapache Electric Co-op, other school representatives, and partnership staff were in attendance.

The chairman conducted the meeting that followed a standard agenda. Elements of the meeting included the call to order, roll call, approval of minutes, call to the public, staff reports (curriculum and marketing specialist, director, and evaluator), and board business. Meeting processes flowed smoothly and the group deviated from the agenda to discuss matters in more depth when needed. Nearly all attendees participated during the discussions that were facilitated during the meeting. Furthermore, partnership business was accomplished efficiently with an evident process for decision making.

Sustainability and staffing were main discussions during the meeting. The board was advised that both the director and curriculum coordinator had accepted full-time positions with the community college starting in June. The group felt that this change was a great loss for the partnership. The group decided that maintaining a single point-of-contact was important and that the executive committee would meet to discuss options to ensure that adequate staffing was maintained. The evaluator facilitated a discussion of the most critical functions that the group wants to maintain.

The group identified the most critical elements of the coordination/management function. They decided that a central figure was needed to communicate with the state, the fiscal agent and to seek alternative

funding sources. Secondarily, coordination of meetings, report preparation and distribution were deemed important. Finally, public relations, including building relationships with local industries were identified as key roles for the director. A similar discussion prioritized student service functions. Keeping district STW coordinators was given the first priority. Groundhog Job Shadow Day, and activities such as career days or career fairs involving multiple districts, were student services that the partnership would like to continue.

Sustainability

The STW philosophy and practices will continue in a number of districts, according to the director. Examples include the increased district sponsorship of the career assessment services, potential district sponsorship of STW coordinators and a the incorporation of STW objectives into the school curriculum. A polling survey of partnering school districts indicated that at least half were committed to continuing STW activities regardless of funding. Nearly half have adopted the use of career portfolios as a graduation requirement and have made internships a requirement for graduation. Furthermore, the community college continues to offer an internship course. The DES continues to offer training to the school staff in the use of the USES/GAT-B career inventories.

The partnership advisory board has addressed sustainability as a part of its strategic planning process. In September 1998, the board defined the foundations for success, guiding strategies and action steps needed to meet its goals for the coming year. The partnership is exploring partnerships which would support STW. Initial contacts have been made with the Show Low Chamber of Commerce. The Youth Transition Project (YTP) continues to be a strong allied program at four schools. The director reports that, as in the previous year, the level of support needed to fully sustain the partnership does not currently exist. However, the advisory board is making progress towards outlining a strategy for action.

Goal 2: Program Coordination and Integration

Program Coordination and Integration

Collaboration with existing vocational and other educational programs continues to be emphasized. School coordinators work with Vocational Student Organizations and Youth Transition Programs within their districts. Networking and sharing resources between schools has been encouraged through partnership efforts to provide common information and a platform for discussion between districts. A new partner, the Northern Arizona Institute for Technology, is in the planning stages. STW could be one component used by the five districts served by the school.

The partnership has supported Career Pathways by sponsoring training for a team from a participating district. Furthermore, the partnership promotes the Career Pathways structure through its web site. Many districts use the Pathways. Fourteen of 18 active schools reported implementing Career Pathways to some extent according to the state's "Level of Involvement" (LOI) survey administered in spring 1998. According to the director, ten school districts and two charter schools are using Career Pathways as their model for implementing STW.

Northland Pioneer College continues to be supportive and involved in the partnership. The director and marketing coordinator are employed part time by the college. The Cooperative Education Program has been renamed the "STW Internship." The college hopes to increase the number of students served through this program. Additionally, concurrent enrollment agreements between high schools and Northland Pioneer College continue to be implemented.

Universal Access:
School Participation and Roll-out Strategy

For FY 1998-99, each partnership identified the "active" schools within their region. "Active" schools are defined as those which formally partner with the regional STW partnership and which involve at least some of their students in STW activities as described on the national *Progress Measures* (see Appendix A). Northland STW System reported that 82% of all public schools were "active" participants as of March 1999. "Active" schools are summarized in Table 2 on the following page. When BIA schools are included in the total, 77% are active.

Table 2
"Active" School Participation for the Northland STW System

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active" Schools (FY 1998-99)					
	E/J	M/J	J/S	K-12	Total	E/J	M/J	J/S	K-12	# Total	% Total
Alpine ESD	1				1	1				1	100
Blue Ridge USD	2	1	1		4	2	1	1		4	100
Concho ESD	1				1	1				0	0
Heber-Overgaard USD	1	1	1		3	1	1	1		3	100
Holbrook USD	2	1	1		4	2	1	1		4	100
Joseph City USD	1		1		2	1		1		2	100
McNary ESD	1				1	1				1	100
Round Valley USD	2	1	1		4	2	1	1		4	100
Sanders USD	1	1	1		3	1	1	1		3	100
Show Low USD	6	1	1		8	6	1	1		8	100
Snowflake USD	5	1	1		7	5	1	1		7	100
St. Johns USD	2		1		3	2		1		3	100
Vernon ESD	1				1					0	0
Whiteriver USD	3	1	1		5	2	1	1		4	80
Winslow USD	3	1	1		5					0	0
Charter Schools	1		7	1	9	1		4	1	6	67
TOTAL PUBLIC SCHOOLS	33	9	18	1	61	27	8	14	1	50	82
BIA	3				3					0	0
Navajo Special Services				1	1					0	0
TOTAL	36	9	18	2	65	27	8	14	1	50	77

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

Table 3 details active school participation in the partnership, according to the state's LOI survey which is used to describe school involvement in STW. This survey was used at the partnership level to help plan technical assistance and roll-out strategies and provides a state-wide indicator of systems change. The survey, designed by a team of regional evaluators, incorporated concepts from the national *Progress Measures* survey. Areas measured include: depth of school participation in terms of the student population served and the degree to which STW concepts are institutionalized in the school; curriculum, assessment, and instructional practices; level of business involvement and relationship to GSPED cluster industries; and affiliation with the local/regional partnership.

Only active public schools (those who have implemented student STW activities and formally partner with the regional partnership) are included in table below. When asked to describe how the school is associated with the local/regional STW partnership, most active schools (83%) said that they received technical assistance. A greater share of Northland STW schools reported receiving funding, participating in local/regional STW planning or receiving other services when compared to the state as a whole.

Table 3
Type of Active School Participation Northland STW System

Level of Involvement School Survey-Spring 98

	Active Schools			
	Partnership		State	
	N	%	N	%
Participate in local/regional STW planning	20	67%	140	50%
Receive technical assistance	25	83%	203	73%
Receive funding	22	73%	135	48%
Other unspecified	4	13%	23	8%
Total that responded to this question*	30	100%	280	100%

* May be counted in more than one category

Integration with One-Stop Career Centers

The One-Stop Career Center has been more fully developed during the year. Internet accessible computers have been placed at six college locations. Career development and exploration activities such as resume writing, electronic resumes, and electronic referral processes are now available on campus. The public, including students, can use the sites located throughout the county in regions of greatest need. Future plans to link into the DES's ALEX system are being developed. Electronic self-referral will then be permitted and businesses will be able to list their jobs. The director continues to participate on the board of the One-Stop Career Center. Collaboration with DES and JTPA also has been promoted.

Targeted Access for Special Populations

Special populations are served through the individualized approach adopted by the school coordinators. Interest inventories are tailored to meet the unique needs of each student. Furthermore, out-of-school youth are provided services through charter schools and through the One-Stop Career Centers of Navajo County. In addition, the collaboration with the Youth Transition Program (a program serving special needs students) has expanded to another district during the past year.

STW Elementary, Middle, High School, Postsecondary Initiatives

The partnership tracks service units provided to students on an on-going basis. Overall, the partnership reported delivering 23,636 service units as of December 1998. This represented an increase of 9,000 more units of service than the prior year. The partnership more than doubled the number of internships completed and nearly doubled the number of shadowing experiences completed and added to career days and job fairs. Other services, which includes assessment, is the largest service category (14,582) and also increased substantially.

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According to the state's LOI survey conducted in spring 1998, the share of active schools in this partnership with at least half of students participating is higher than for the state as a whole. Northland's schools use a similar variety of activities as their peers statewide, but the share of schools that have activities at least monthly (55%) is lower than the share reported for the state as a whole (82%). Also, relatively fewer schools have school-wide or institutionalized activities (18%) compared to the state as a whole (29%), and business involvement (1.2) is slightly below that of the state as a whole (1.4). Details are provided in Table 4.

Table 4
Level of Involvement Survey Spring 1998: Northland STW System Active Schools

	Elementary		Middle/Junior High		High School		Total	
Indicators	Partnership	State	Partnership	State	Partnership	State	Partnership	State
Percent of schools with activities at least monthly	42%	62%	63%	75%	80%	85%	55%	70%
Percent of activities used	59%	68%	77%	75%	86%	73%	69%	70%
Percent of schools with at least 50% of students participating	92%	79%	88%	79%	90%	88%	91%	81%
Percent of schools with school-wide or institutionalized activities	4%	21%	38%	39%	40%	43%	18%	29%
Mean level of business involvement (1-3)	1.0	1.3	1.1	1.4	1.7	1.5	1.2	1.4

Elementary

Among Northland's elementary schools, 82% were categorized as active during the current year. According to the 26 active schools who responded to these items on the LOI survey, nearly all (92%) involve at least half of their students in STW activities. This is a relatively greater share than for the state as a whole. Monthly activities, however, are reported by a smaller share of schools (42%) than was reported across the state. Nearly 60% of listed activities were used. Most popular activities include career guest speakers, used by virtually all of the schools, followed by field trips and class projects. The share of elementary schools reporting staff training was higher than the state as a whole (65%, compared with 57%).

Middle/Junior High

Nearly 90% of the middle/junior high schools were reported as active during the past year. Eight schools responded to the LOI survey last spring. Based on the survey, schools use a variety of activities and relatively more schools involve at least half of their students. More than half have activities at least on a monthly basis. All of the schools reported using field trips, and all but one use career inventories, career mentoring, and career fairs. The partnership ranks highest in the share of schools with career fairs, and with career mentoring among all regional partnerships.

High School

Nearly 80% of high schools or other types of schools were active during the year. Ten schools reported their activities in the spring LOI survey. Partnership high schools are relatively more active than the elementary and middle/junior high schools. Eighty percent or more of the schools have activities at least

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monthly, use a wide variety of activities, and involve at least half of the students. Business involvement is, on average, above that of the state as a whole (1.7 compared to 1.5). The share of schools with school-wide activities (40%) is similar to that of other partnerships (43%) and is relatively low. When compared to other partnerships, Northland ranks highest in the share of schools offering career inventories, field trips, career mentoring, and class projects with careers. They rank second in the share of schools who offer staff training about career exploration.

Career Counseling

District resources for counselor involvement remains minimal. Therefore, the main impact that the partnership has had on counseling is to provide the assessment tools as a platform for individual reflection. Furthermore, materials have been gathered to assist with follow-up to the GATB inventories. Many schools have adopted the Occupational Outlook Handbook. Most have taken the OIS manual to link resources to match students' interest surveys. The materials provide students with details about the occupations that have been identified. In the spring LOI survey, nearly all of the active schools that answered (15 out of 17) indicated that students work with a teacher/counselor to learn about careers. The share of schools (88%) is slightly higher than for the state as a whole (83%).

Goal 3: Technical Assistance

Ongoing Needs Assessment

The partnership tracks activities on a quarterly basis. New indicators have been developed and the reporting process has been refined during the year. The director feels that the system has been effective in monitoring activities within districts. Feedback is also provided through the coordinator meetings, site visits, and advisory board meetings. Facilitated discussions are included as a part of the strategic planning process.

Curriculum/Assessment Initiatives
(Including Career Pathways, *K-12 Workplace Skills*, applied/contextual curriculum)

Curriculum has been developed within the partnership and made available to districts. As a part of district training, materials on Workplace and Technology Skills and Career Pathways have been distributed to school personnel. Furthermore, a videotape library may be borrowed from the partnership office. Materials include the "Meet the Mentor" series and the DES "Employment Skills" series and assessment materials such as "E-WOW" (Explore the World of Work) are available from the partnership.

Professional Development Initiatives
(Including business and educators)

One or more individuals within each district have been trained in the administration and interpretation of USES/GAT-B and participated in an Occupational Information System(OIS) training session. STW in the High School Classroom, Curriculum Integration—A Concept/Process Approach, and Arizona's Career Pathways workshops have been offered by the curriculum and marketing specialist. Several districts offer teacher internships in collaboration with the Arizona Department of Education.

The curriculum and marketing specialist continues to be available to meet immediate teacher needs. She has frequently provided training and distributed materials and lesson plans. She has visited all schools in the partnership and provided one-on-one training as well as inservice training when requested. More than 30 requests for individual assistance were met over the past year. Topics which the specialist can assist

with include portfolio assessment, cooperative learning, discovery learning, developing capable people, "True Colors" and teaching to multiple intelligences.

Other Technical Assistance Activities

Strategies to include Indian Tribes have been set through inclusion of the Whiteriver School District (Apache) and the Sanders School District (Navajo) in the partnership.

Goal 4: Community Involvement
(Including employers and the community-at-large)

A broad approach to involve the community at large through the involvement of employers and students has been pursued. The director and the curriculum and marketing specialist have both solicited community involvement by making presentations at community organizations such as the Chambers of Commerce, Rotary Clubs, and a variety of school functions. More targeted strategies to include parents have not proven to be successful, according to the director. Parents are better reached through their business roles in the community.

Goal 5: Public Awareness

The evaluation efforts reported for July through December 1998 include one presentation to 500 students and seven newspaper articles. Other public awareness efforts included a newspaper campaign in fall of 1998 by ten newspapers in the partnership and a series of radio public awareness spots. A local radio station in Holbrook offered to do free public relations spots which were able to be used in three other stations. The spots were carried by the four largest radio stations in August and September. This coincided with the initiation of a similar campaign on public-access television. Groundhog Job Shadow Day was promoted through a live talk show in fall of 1998. Bill Cosby spots were also used to promote public awareness. Publicity surrounding Groundhog Job Shadow Day was reported as a "media blitz." Since over 2,000 students and 180 businesses participated in the day, it was a good opportunity to introduce STW to a large audience.

Goal 6: System Evaluation

In addition to the state and national data collection, the partnership has a highly developed data collection system. The system has been refined to include eight key data points as well as on-going activity logs. The partnership has used evaluation information to help plan its direction and has been very pro-active in defining its own strategies.

The Northland business database was sited as a promising strategy by the United States Chamber of Commerce. The employer database can be used by students and schools to identify opportunities in local businesses. The web site has also been enhanced over the past year. The partnership has engaged a webmaster to help complete the database. Eventually forms would be able to be downloaded directly from the site and businesses would be able to register. The database is continues to be one of the keystones of their program.

Discussion

Partnership Assets

The Northland STW Opportunities System has been very effective in mobilizing districts to provide STW services to students. They have very well-organized data collection and meeting processes. Furthermore, they have been innovative in their use of the web site to facilitate connecting activities between businesses and educators. Training and curriculum development are another keystone of their endeavors. Help for teachers has been made available on an "as- needed" basis. The partnership has well-defined responsibilities for its school coordinators and, therefore, has been able to adopt strategies to fit the needs of the local communities while providing a common ground for joint planning. Due to strong ties with other workforce development entities, student assessment has been offered to many districts.

The partnership has begun a discussion for succession planning and sustainability. The key stakeholders have been involved in the planning for the future.

Partnership Challenges

Developing plans for sustainability is the most pressing issue for the partnership. Given the change in leadership, the need to clarify and solidify the goals of the partnership are also essential. It is a critical time for the partnership to further examine their strategies.

Lack of business attendance at the advisory board meeting points to the need to continue efforts to involve business partners. Given the number of small businesses and the distances that individuals must travel some alternative strategies may be needed to get the requisite input.

Partnering with other entities within the community is a challenge that the partnership has begun to address. However, it seemed that the inquiries are very preliminary and that a great deal would need to be done to accomplish any formalized agreements.

At the local school level, developing administrative support and prioritizing STW as an important way to help students learn continue to be critical. There are a number of financial constraints on rural schools which make transportation difficult and new funding difficult. Integrating vocational and academic learning and making career information available to all students continues to be a challenge in many schools.

Summary and Suggestions

Given the change in leadership, the need to clarify and solidify the goals of the partnership are essential. Continuation of the process which the partnership has initiated will help to provide continuity during this transition.

Sustainability discussions seem to be in their infancy and, therefore, need to be more fully developed. All viable alternatives should be considered. A commitment from participating districts or businesses to support site coordinators is one option that may be pursued. However, other ideas should be considered as well.

The partnership should continue the strategy of seeking to build partnerships with community entities such as the Chamber of Commerce. Furthermore, persons able to influence district policies should be identified and involved in the planning process, if possible.

The partnership should build on its strengths which includes the business database. This tool has been nationally recognized and is a promising approach. Schools should be encouraged to use it and enhancements that would allow businesses to self-register should be pursued. It will be important to identify parties willing to sponsor the database and promote connecting activities.

Pima & Santa Cruz Counties STW Partnership, Inc.

Site Visit: February 8, 1999

Region Served: The Pima & Santa Cruz Counties School To Work (STW) Partnership serves south central portions of Arizona including the Tucson and Nogales metropolitan areas.

FY 1995-96 funding:	$ 584,827
FY 1996-97 funding:	661,424
FY 1997-98 funding:	726,802
FY 1998-99 funding:	556,349
Total investment to date:	$2,529,402

School Profile

The Pima & Santa Cruz Counties School To Work (STW) Partnership serves more than 136,000 students in 21 public school districts, charter schools, the Department of Youth Treatment and Rehabilitation (DYTR) and private schools. The area is served by Pima Community College, the University of Arizona (U of A), and several private proprietary institutions. The census estimates that 30.1% of children (aged 5-17) in Santa Cruz County and 23.6% of children in Pima County lived in families in poverty. This compares to the state average of 22.1%.

Table 1
Total Student Enrollment for the Pima & Santa Cruz Counties STW Partnership (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)*
Grades Pre-K through 6	77,402
Grades 7 through 8	21,143
Grades 9 through 12	36,272
Ungraded Elementary (K-8)	637
Ungraded Secondary (9-12)	1,305
TOTAL	136,759

*Note: Enrollment data reflect 260 schools for which data were available of the 282 public schools identified in this partnership.

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

The Tucson metropolitan area has several large employers including defense contractors such as Raytheon Systems Company, aerospace industries, and a military base. The director also indicated that there are a growing number of entrepreneurs as well. Small research-related firms and manufacturers, such as in the optics cluster, are well-represented in the community. The region is a tourist destination and continues to be attractive to retirees. As a result, industries related to the Tourism and Senior Living clusters are key to the area. Bioindustry, Environmental Technology and Software business also are present and are represented on the partnership board.

Santa Cruz County differs in that it is predominantly rural and a high number of residents are Spanish-speaking. The relative share of public sector employers is higher than in the metropolitan areas. Due to the proximity to the Mexican border, transportation and distribution businesses (e.g., trucking) — including related businesses such as warehousing — are important.

Goal 1: System Governance and Partnership Development

Partnership Governance and Staff

The 22- member partnership board continues to provide strong leadership, according to the director. The board has a five member executive committee, ad-hoc, and standing committees (Personnel, Sustainability, Nominating, Finance, and Mini-Grant.) The board is charged with strategic planning and dedicated meetings in November of 1998 and February and March of 1999 to strategic planning. They have refined their mission and goals and reevaluated their strategic direction.

Board membership has changed due to attrition and one-third of the board will rotate off the board in 1999. Attendance varies due to competing demands of prominent members. The director notes that the board has stature in the community and will be effective in integrating STW with other community efforts and sustaining the initiative. The board is very effective and according to one board member is "the best board that they sit on."

The partnership is staffed by a director, part-time marketing coordinator, and an administrative assistant. A business developer is contracted to find quality jobs for students and to run business round tables. Evaluation is also contracted. The director has indicated that the consultants have been very effective and that the partnership staff continues to work well together.

Sustainability

Sustaining the existing partnership structure has been a primary goal. The board has taken steps toward establishing themselves as a 501(c)(3) tax-exempt organization with the IRS. The partnership has been incorporated and is waiting for the final IRS approval. The board is considering other strategies such as fee-for-service opportunities that may diversify sources of funding.

On a programmatic level, the director feels that many schools have incorporated STW practices and philosophy into their curriculum. Therefore, many activities will be continued beyond the life of the funding. However, she cautions that it would be more static and less innovative without the partnership support. Funded projects include a plan for sustainability and require matching funds.

According to the director, the overall strategy is to avoid redundancy, leverage dollars to bring existing programs closer to the STW model, and reinforce the need to include a rigorous academic piece. In this way, STW principles are incorporated into existing programs and practices.

Goal 2: Program Coordination and Integration

Program Coordination and Integration

Collaborative efforts are in place with a variety of education and training entities. The Fred G. Acosta Job Corps Center through ResCare, Inc. is one important partner. The Job Corps program has been outstanding, according to the director. The sponsor, Teledyne, has 200 students involved in rigorous academic programs tied to their vocational program. A mutual need for finding new funding sources has encouraged the collaboration. A new partner serving at-risk students, Tucson Youth Development, has been approached. Other partners mentioned in the previous year continue to be involved including: WACA (the Western Apprenticeship Coordinators Association); In-Step (a joint U of A-Urban League project); Primavera Builders; Vail Charter High School; and Pledge-A-Job. Groundhog Job Shadow Day was successful due to the collaboration with America's Promise, the Volunteer Center, and Junior

Achievement. In addition, Tech Prep co-sponsors summer career academies at community college locations and the Summer Educator Internship Program. Beyond this joint effort, however, the relationship with Tech Prep is described as being strained due to differences of mission and perceived competition for the same resources.

The adoption of the Career Pathways model has been encouraged through the installation of Employer Where software on the web site. It allows employers to list jobs by pathway and industry by GSPED clusters and students to sort opportunities of interest by either designation. The "CAREERstorm" game, developed in Yavapai County and promoted statewide, has been used to explain GSPED clusters and foundation in relation to pathways. This has been effective. However, as in the past, the director indicated that Career Pathways are not a primary goal of the partnership. She feels that many parents believe that the pathways do not address the careers of the future and that it is sometimes difficult to link actual job shadow areas with a particular pathway. Schools currently using Career Pathways include Amphitheater School District's two high schools, Vision High School and Vail Charter School. The state's "Level of Involvement" (LOI) survey conducted in spring 1998 shows six of the seven responding high schools use Career Pathways.

The director describes the relationship with U of A as being strengthened, particularly with the College of Education. There are "solid enduring relationships" with many individuals. There are representatives of higher education involved in mini-grant evaluation, projects, and teacher training. Northern Arizona University is offering teacher training emphasizing STW in the Vail District. On a general level, institutions of higher education are involved in concurrent enrollment programs with a number of high schools. The partnership also is supportive of programs such as In-Step, jointly sponsored by the U of A and the Tucson Urban League, which places disadvantaged youth in work experiences in academic departments of the university. Pima Community College sponsors Summer Career Academies.

Universal Access:
School Participation and Roll-out Strategy

For FY 1998-99, data were collected from each partnership regarding the status of schools considered to be "active" within their region. "Active" schools are defined as those which formally partner with the regional STW partnership and which involve at least some of their students in STW activities as described on the national *Progress Measures* (see Appendix A). Of the public schools and programs identified, 132 schools/programs (48%) are active. Active schools are listed in Table 2.

Roll-out strategies remain the same as last year. Successful projects are asked to share their successes and an incentive is offered for replication. The director feels that to a large extent information sharing between programs has been effective and communication between schools has increased. An effort to increase activity in Santa Cruz County has been initiated. The Economic Development Foundation will replicate the carpenter's apprenticeship program. In addition, three new programs have been funded in the county.

Table 3 details some of the types of involvement of active schools, according to the state's LOI survey conducted in Spring 1998. This survey was used at the partnership level to help plan technical assistance and roll-out strategies and provides a state-wide indicator of systems change. The survey, designed by a team of regional evaluators, incorporated concepts from the national *Progress Measures* survey. Areas measured include: depth of school participation in terms of the student population served and the degree to which STW concepts are institutionalized in the school; curriculum, assessment, and instructional practices; level of business involvement and relationship to GSPED cluster industries; and affiliation with the local/regional partnership.

Table 2
"Active" School Participation for the Pima & Santa Cruz Counties STW Partnership

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active" Schools (FY 1998-99)					
	E/J	M/J	J/S	K-12	Total	E/J	M/J	J/S	K-12	# Total	% Total
Ajo USD				1	1				1	1	100
Altar Valley USD	2	1			3		1			1	33
Amphitheater USD	12	3	4	1	20	11	1	3		15	75
Catalina Foothills USD	4	2	1		7			1		1	14
Continental ESD	1				1	1				1	100
Flowing Wells USD	6	1	3		10	3	1	1		5	50
Indian Oasis USD	2	1	2		5			1		1	20
Marana USD	10	2	3		15	7	2	3		12	80
Nogales USD	6	4	2		12	2	2	2		6	50
Patagonia ESD	1	1			2	1	1			2	100
Patagonia UHD			1		1			1		1	100
Pima Accommodation District	1		2	1	4					0	0
Sahuarita USD	2	1	1		4	2	1	1		4	100
San Fernando ESD	1				1					0	0
Santa Cruz ESD	1				1	1				1	100
Santa Cruz Valley USD	2	1	1		4	2	1	1		4	100
Sonoita ESD	1				1	1				1	100
Sunnyside USD	13	4	3	1	21	5	4	2		11	52
Tanque Verde USD	2	1			3					0	0
Tucson USD	75	23	16	2	116	20	14	11		45	39
Tucson Programs			4		4			3		3	75
Vail ESD	2	1			3	2	1			3	100
Charter Schools	12	1	21	1	35	2		12		14	40
TOTAL PUBLIC SCHOOLS	156	47	64	7	274	60	29	42	1	132	48
Department of Youth Treatment			2		2			1		1	50
Private Schools/Other	1		2	3	6	1		2	3	6	100
TOTAL	157	47	68	10	282	62	29	45	4	139	49

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

Only active public schools (those who have implemented student STW activities and formally partner with the regional partnership) are included in Table 3. When asked to describe how the school is associated with the local/regional STW partnership the frequency of responses was nearly the same for all three types of participation. However, a relatively smaller share of Pima STW schools reported receiving technical assistance (56%) when compared to the state as a whole (73%).

Table 3
Type of Active School Participation: Pima & Santa Cruz Counties STW Partnership

Level of Involvement School Survey-Spring 98	Active Schools			
	Partnership		State	
	N	%	N	%
Participate in local/regional STW planning	13	54%	140	50%
Receive technical assistance	12	50%	203	73%
Receive funding	11	46%	135	48%
Other unspecified	2	8%	23	8%
Total that responded to this question*	24	100%	280	100%

* May be counted in more than one category

Integration with One-Stop Career Centers

The director has developed working relationships with a number of workforce development and community entities. The partnership director sits on the Governor's Council on Workforce Development Policy. She provides representation for STW as well as for the Tucson area. She serves on the Youth Committee of Tucson's Private Industry Council (PIC) as well. According to the director, the One-Stop Career Center is well-developed in Pima County and has been one of the earliest successful centers. The director of the Pima County Community Services is on the STW board and has worked closely with the partnership on a number of initiatives. However, according to the director, because the One-Stop targets at-risk youth, they are only one small part of STW. An alliance with the public library is part of the national initiative "Libraries as Partners in Youth Development." This promises to be the catalyst for involving a number of other city and county funded groups, according to the director.

STW Elementary, Middle, High School, Postsecondary Initiatives

The partnership estimates that they have provided 134,000 units of service to students over last year. They have provided seed money to 77 projects to date. Nine are funded for the current year. The projects are then expected to become self-sustainable and to replicate themselves. Even though projects are no longer funded, they remain a part of the system and follow-up information is collected on them. Table 4 provides details from active schools regarding their level of involvement in implementing STW. Table 4 illustrates, in part, the extent of elementary, middle/junior high school, and high school activities in the partnership. These data are supplemented by site observations and information provided by partnership personnel.

Elementary

Table 2 shows that 60 public elementary schools were active as of March 1999. Of these, 21 responded to the state's LOI survey. More than half of the sampled schools (57%) have career awareness activities at least on a monthly basis. Seventy-one percent of the schools involve at least half of the students in activities. Nearly half (48%) of the sampled schools have implemented STW activities on a school-wide basis. Business involvement at the elementary level (1.4) is comparable to that of other partnerships in the state (1.3).

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Several projects either were visited or described that illustrate further the nature of elementary STW activities. The "Models of Food Production Project" is a joint effort among Ocotillo Elementary School, Sierra Middle School, and Sunnyside High School. At the elementary school, garden space has been built for students with the help of middle school students. The garden is used by a number of teachers to augment their science curriculum. Another elementary project focuses on beautifying the school entrance. The project pairs elementary and middle school students with volunteers. The Audubon Society is a partner in the project. St. Michael's Parish Day School and KOFA & Company are building an urban wildlife habitat to reinforce science skills and to build awareness of career opportunities in environmental services. This private school serves students in grades K-8. Thornydale Elementary School Sixth Grade Businesses also was recognized as an Arizona 5-Star Outstanding Practice. This school provides all sixth graders with the opportunity to start, manage, and run small businesses.

Table 4
Level of Involvement Survey Spring 1998: Pima & Santa Cruz Counties STW Partnership Active Schools

	Elementary		Middle/Junior High		High School		Total	
Indicators	Partnership	State	Partnership	State	Partnership	State	Partnership	State
Percent of schools with activities at least monthly	57%	62%	89%	75%	100%	85%	73%	70%
Percent of activities used	61%	68%	88%	75%	64%	73%	72%	70%
Percent of schools with at least 50% of students participating	71%	79%	67%	79%	86%	88%	73%	81%
Percent of schools with school-wide or institutionalized activities	48%	21%	78%	39%	71%	43%	59%	29%
Mean level of business involvement (1-3)	1.4	1.3	1.8	1.4	1.4	1.5	1.5	1.4

Middle/Junior High

Of the middle schools identified in the partnership, 29 are active. Nine responded to the LOI survey. These nine schools use a wider range of activities than reported by their peers statewide. Furthermore, most of them (89%) reported having activities at least monthly. Relatively fewer schools (67%) had at least half of the students participating in STW activities. The share of schools with school-wide implementation (78%) is nearly double that of the regional partnerships as a whole (39%).

Middle school programs which have been recognized through the state's 5-Star Outstanding Practice peer review process include the "Recycling and Resources Project" and Tortolita Broadcast News at Tortolita Middle School. Students in these projects run a recycling business and a school news station, respectively. More recently, two other middle/junior high schools were acknowledged through the state's peer review process. Tucson Unified School District "Business Zone Project"gives seventh graders the opportunity to shadow in 27 businesses within walking distance of the school. Wakefield Middle School's "The Wizards of Wakefield" helps students design and publish a literary magazine and compact disc featuring student work.

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High School

Forty-two public high schools are active within the partnership. Of those, seven responded to the LOI. All of those schools have career preparation activities at least on a monthly basis and the majority involve more than half of their students. Furthermore, the relative share of schools with school-wide activities is nearly double the regional partnerships as a whole.

During the site visit, the Sunnyside High School outdoor education program was toured. The school has enhanced an existing program by adding a career component and partnering with the elementary and middle schools and the Tucson Audubon Society. Students built a 32x24 foot greenhouse at the high school and have planted outdoor gardens. The project involved the whole community in a "Harvest Celebration" when students sold produce and art work. Workshops showing teachers how to incorporate the garden into the science curriculum were planned. Students have also designed a web site and help to raise funds to support the program. Other high school programs that were mentioned include Amphitheater High School's integrated approach to STW.

Career Counseling

The partnership envisions counseling as a shared responsibility of counselors, teachers, school personnel, parents, businesses and peers. The partnership offers a variety of strategies to enable individuals to be more effective counselors. Activities include training, facilitating dialog, and providing access to materials. LOI survey results suggest that teachers/counselors are, in fact, helping to facilitate students' career learning.

Goal 3: Technical Assistance

Ongoing Needs Assessment

The board is actively involved in reviewing information from a variety of sources and using the information to shape their strategic direction, according to the director. Monthly reports from funded mini-grant projects continue to be used to review programs. Focus groups also are used , according to the director. One new source of information will be provided by a Public Policy class at the University of Arizona. They will evaluate the effectiveness of Groundhog Job Shadow Day and the Amphitheater High School Senior Exit Project.

Curriculum/Assessment Initiatives
(Including Career Pathways, *K-12 Workplace Skills*, applied/contextual curriculum)

The partnership provides a clearinghouse of information for parents, educators and businesses. They have developed a web site and frequently refer people to Internet resources such as Career Mosiac. *K-12 Workplace Skills* and all standards have been presented to the board. The distribution of information has been a key emphasis. Every teacher has received a list of resources available from the public library and through the web. Reference books and other resources (e.g., women in non-traditional careers) also are available at the partnership office. Materials also have been given to the local libraries for distribution throughout the community. Manuals on mentoring and job shadowing and the National Employer Leadership Council *Employer Involvement* booklet have been widely distributed throughout the partnership.

The partnership also shares information produced by current STW participants. For example, lesson plans are published as a result of the Summer Educator Internship Program. They are compiled and distributed through a joint effort of Tech Prep and STW.

Professional Development Initiatives
(Including business and educators)

Educators are offered the opportunity to participate in a Summer Educator Internship Program. Teachers are offered a stipend to intern with a local business and then, with the help of a curriculum specialist, to develop and integrate their experiences in the classroom. Thirty-four teachers completed the program last year. According to the director, this is the most successful and popular initiative for educators. Other training is aligned to events such as Groundhog Job Shadow Day.

Business education is largely a result of participation in activities, board membership, and through direct presentations to community business groups. Training is a part of the project initiation process and is also included in Groundhog Job Shadow Day. Training for use of the Internet Software Employer Where is planned for both businesses and educators.

Strategies for Continued Partnership Development, Including Indian Tribes

The partnership continues to work with Indian tribes, including the Pascua Yaqui and Tohono O'odham tribes which both have direct federal STW grants. Another local initiative— the Metropolitan Education Commission— is including Native American students in their youth leadership program. The director also has made herself available to provide technical assistance to the Navajo Nation.

Goal 4: Community Involvement
(Including employers and the community-at-large)

Parental involvement is encouraged through the mini-grant process. Funding is contingent upon a plan for parental participation. In one project, a computer camp sponsored by Easter Seals, parents joined students in training.

Employers have been involved all along and there has been no lack of interest from the business community, according to the director. A business developer has been charged with soliciting input from businesses and identifying potential participants. Business focus groups have proven to be helpful. The promotion and development of the STW web site is another strategy to increase community and employer involvement. The employer section will provide information about work based learning opportunities for students.

Goal 5: Public Awareness

For the period July through December 1998, there were 28 presentations and 22 direct mailings, as well as 471 television spots, one magazine article, and 20 newspaper articles. The partnership estimates that they made 183 direct student contacts, 26,586 parent contacts, 14,541 teacher contacts, 453 counselor contacts, 474 school administrator contacts, 8,175 business and industry contacts, and 16,034 general contacts for a total of 66,346 contacts through either direct mail or presentations.

Public awareness efforts have included the distribution of newsletters, promotion of special events such as Groundhog Job Shadow Day, and the use of cable television and other media. There is one newsletter for businesses and one for parents. Furthermore, the STW State System video and the 30-minute

documentary *Beyond the Headlines: STW* continue to be used. A 12-week series on Access Cablevision featured business people and STW participants. Other efforts have included displays and presentations to a variety of groups including teacher inservice gatherings and business trade organizations.

The STW name is attached to all funded projects. In an effort to be inclusive, the partnership decided to not "push" the brand name of STW. The director noted that there is, therefore, some "disconnect" between promoting activities under the name STW and giving credit to partners to build sustainability.

Goal 6: System Evaluation

System evaluation is important to the partnership. A renewed emphasis has been the collection of outcome indicators for schools and programs funded by the partnership. The funded programs are required to submit a monthly report that explains progress towards meeting project objectives. In addition, the projects receive technical assistance as a part of the bidder's conference to help applicants consider how they will evaluate their programs. A database has been established during the year that will help to collect and report information easily. A survey of students is encouraged before and after program participation measuring career awareness. Evaluation feedback is intended to help monitor and adjust program and partnership functions. According to the director, mid-course corrections can often be made easily due to the evaluation systems in place.

Discussion

Partnership Assets

The Pima & Santa Cruz Counties STW Partnership, Inc. has experienced exponential growth over the past year, according to the director. For example, there are more teachers participating in internships than in the first two years combined. She points to the expansion of involvement of school board members and principals, the replication of previously successful programs, the adoption of nine new projects and the adoption of the STW Coordinator by two districts as evidence of the successes of the partnership. Two charter schools also have STW Coordinators. According to state data, the partnership's active schools are near or above the overall level of involvement for the state as a whole, in many areas.

Furthermore, the governing board remains strong and influential in the community. They have targeted sustainability as a key goal and have refined their strategic direction. There is more acceptance and participation by community groups. The partnership's role as an information broker is also expanding with the further development of the web site.

Partnership Challenges

The partnership is still struggling for a clear identity and a need to define its mission while being inclusive. One of the challenges of enhancing existing programs is to be sure that the elements of STW are fully incorporated into the program. The development of outcome measures should help individual funded projects measure their level of involvement. Expanding support and developing more in-depth participation will be a challenge in this partnership, as it is in the others.

Summary and Suggestions

The partnership should continue to develop and refine strategies for sustainability. The direction that the partnership has undertaken is aggressive and will be a model for other partnerships. The structure

encourages business community participation to maintain the partnership structure and support school activities.

Efforts to measure outcomes should be used to help schools reinforce their objectives. Schools should be held accountable for helping students increase career awareness, exploration, and preparation. This effort has already begun but should be reemphasized, particularly when funding decisions are made.

The web site should be enhanced to increase its usability and access. As mentioned, training is planned and would allow the site to reach its full potential as a clearinghouse for information. The model is promising and should be developed.

Pinal County STW Partnership

Site Visit: April 8, 1999

Region Served: The Pinal County School To Work (STW) Partnership serves south central Arizona. It is bounded on four sides by Maricopa, Gila, Graham, and Pima counties and includes part of the Papago and Gila River Indian Reservations.

FY 1995-96 funding:	Planning phase: unfunded
FY 1996-97 funding:	$359,462
FY 1997-98 funding:	248,277
FY 1998-99 funding:	216,208
Total investment to date:	$823,947

School Profile

The Pinal County STW Partnership serves 70 public schools in 19 districts and four other schools. Both rural and suburban areas (Apache Junction) are served by the partnership. Only four districts have more than three schools. More than 27,000 students attended school in the partnership area as of October 1998 as shown in Table 1.

Table 1
Total Student Enrollment for the Pinal County STW System (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)*
Grades Pre-K through 6	15,358
Grades 7 through 8	4,504
Grades 9 through 12	6,994
Ungraded Elementary (K-8)	87
Ungraded Secondary (9-12)	91
TOTAL	27,034

*Note: Enrollment data reflect 65 schools for which data were available of the 70 public schools identified in this partnership.

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

Pinal County has a varied business base. ASARCO and BHP operate mines in the eastern part of the county. Other large companies include Abbott Pharmaceutical Company and Frito Lay. As in other rural partnerships, the public sector employs a great number of people. Agriculture, supporting the Food, Fiber and Natural Products industry cluster, also is important to the local economy. Small businesses predominate throughout the county.

Goal 1: System Governance and Partnership Development

Partnership Governance and Staff

Board structure has not changed since the previous year. The primary functions of the board are to set policy, approve budgets, and hire the director for the partnership. According to the director, the board has been effective; however, membership has been somewhat fluid due to business transfers.

Furthermore, parental and student representation has not been realized. The board continues to seek new membership. The director indicated that a geographic and business mix has been maintained. The board allocates funds to support mini-grants and to districts to support the site coordinators.

The partnership director, administrative assistant, part-time marketing specialist, and contracted evaluator provide support to partnership efforts. The director describes their working relationships as very positive and effective.

Site coordinators have been expanded from three (Ray, Santa Cruz Valley and Maricopa) during FY 1997-98 to ten who are now placed county-wide. Coordinators serve high schools and feeder schools. The directors said that the coordinators have been chosen based on district recommendations as persons who can "get things done." Coordinators may be vocational staff, administrators, or counselors. The system has been highly effective, according to the director, and has "exceeded all expectations." Many schools have adopted the STW philosophy as a result of coordinators' efforts.

Sustainability

The number of programs that will continue beyond the life of federal funding has expanded since the prior year, according to the director. This is due, at least in part, to the coordinators. Some of the evidence of sustainability is the adoption of Career Pathways by the Maricopa School District. The Tech Prep Consortium and the STW Partnership have co-sponsored the series of Career Pathways workshops throughout the partnership area. Many of the concepts are now being embraced by schools.

The board discussed sustainability during their retreat in August of 1998. The possibility of establishing a 501(c)(3) was explored and other sources of new funding were discussed. However, according to the director, no final decisions were made to pursue these options. The director indicated that funding the existing partnership structure would be problematic because of budget constraints of participating districts. He felt that it is unlikely that any currently funded educational initiative will divert funds to support the partnership because it is outside of their organization. The districts also are unlikely to continue to stipend coordinators because of the additional expense.

Goal 2: Program Coordination and Integration

Program Coordination and Integration

The partnership has been closely aligned with the Tech Prep Consortium in promoting Career Pathways throughout the partnership. Furthermore, many of the coordinators also are vocational teachers. Therefore, there is integration of the vocational programs within the high schools.

Higher education has been involved in the partnership by virtue of the participation of Arizona State University (ASU) in the Career Pathways project and through the involvement of Central Arizona College (CAC). The CAC helped to develop a partnership with Intel and local high schools in the Semi-conductor Manufacturing Program. They also have sponsored events such as job fairs, college fairs, and field trips for students. The college helps provide a summer career camp for kids in conjunction with the Pinal STW Partnership. The college also is involved in developing the Water and Wastewater Management Apprenticeship program through the Gila River Educational Collaborative.

Universal Access:
School Participation and Roll-out Strategy

For FY 1998-99, each partnership identified the "active" schools within their region. "Active" schools are defined as those which formally partner with the regional STW partnership and which involve at least some of their students in STW activities as described on the national *Progress Measures* (see Appendix A). The Pinal STW Partnership reported that 87% of all public schools were "active" participants as of June 1998. "Active" schools are summarized in Table 2.

The director indicates that all schools have been contacted and involved in some way in STW. The strategy now is to include more charters and more schools on the reservation. Furthermore, site coordinators have expanded schools' level of involvement and have actively encouraged participation at the elementary level. The partnership is trying to add depth to the level of school involvement and to increase the intensity of participation.

Table 2
"Active" School Participation for the Pinal County STW System

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active" Schools (FY 1998-99)					
	E/J	M/J	J/S	K-12	Total	E/J	M/J	J/S	K-12	# Total	% Total
Apache Junction USD	4	2	1		7	4	2	1		7	100
Casa Grande ESD	8	1			9	8	1			9	100
Casa Grande UHSD			3		3			3		3	100
Coolidge USD	3	1	1		5	3	1	1		5	100
Eloy ESD	3	1			4	3	1			4	100
Florence USD	1	1	1		3	1	1	1		3	100
JO Combs ESD	1				1	1				1	100
Mammoth/San Manuel USD	3	1	1		5	3	1	1		5	100
Maricopa Unified	1	1	1		3	1	1	1		3	100
Mary O'Brien ESD	1	1	1		3	1		1		2	67
Oracle ESD	2				2	2				2	100
Picacho ESD	1				1	1				1	100
Ray USD	2		1		3	2		1		3	100
Red Rock ESD	1				1	1				1	100
Sacaton ESD	2				2	2				2	100
Santa Cruz Valley UHS			1		1			1		1	100
Stanfield ESD	1				1	1				1	100
Superior USD	1	1	1		3	1	1	1		3	100
Toltec ESD	1				1	1				1	100
Charter Schools	4	1	4		9		1	2		3	33
Program: Mary O'Brien ACC SD			1		1			1		1	100
Pinal Special Ed. Programs				2	2					0	0
TOTAL PUBLIC SCHOOLS	40	11	17	2	70	36	10	15		61	87
Department of Youth Treatment				1	1					0	0
Private Schools	2			1	3					0	0
TOTAL	42	11	17	4	74	36	10	15		61	82

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

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Table 3 details some of the types of involvement of active schools, according to the state's "Level of Involvement" (LOI) survey conducted in Spring 1998. The LOI survey describes school involvement in STW. This survey was used at the partnership level to help plan technical assistance and roll-out strategies and provides a state-wide indicator of systems change. The survey, designed by a team of regional evaluators, incorporated concepts from the national *Progress Measures* survey. Areas measured include: depth of school participation in terms of the student population served and the degree to which STW concepts are institutionalized in the school; curriculum, assessment, and instructional practices; level of business involvement and relationship to GSPED cluster industries; and affiliation with the local/regional partnership.

When asked to describe the relationship that the school has with the partnership, nearly half (47%) indicated that they participate in local STW planning. A similar percentage of schools (42%) said that they received technical assistance. The share of schools receiving funding is 26%.

Table 3
Type of Active School Participation: Pinal County STW System

Level of Involvement School Survey-Spring 98	Active Schools			
	Partnership		State	
	N	%	N	%
Participate in local/regional STW planning	9	47%	140	50%
Receive technical assistance	8	42%	203	73%
Receive funding	5	26%	135	48%
Other unspecified	4	21%	23	8%
Total that responded to this question*	19	100%	280	100%

* May be counted in more than one category

Integration with One-Stop Career Centers

The One-Stop Career Center is just now "getting off the ground" according to the marketing specialist. The partnership staff have approached the One-Stop director to be involved in planning meetings. However, the One-Stop Career Center has not been visible in the community. The newspaper had just announced that the One-Stop Career Center would be opening soon. The partnership staff plan to follow-up with the Center and request that they become further involved.

Targeted Access for Special Populations

The partnership has supported equity training and encourages the participation of all students in STW activities. Efforts to serve incarcerated youth continue through the Pinal County Department of Youth Treatment. Local coordinators are charged with the provision of technical assistance to special education teachers in their respective schools.

STW Elementary, Middle, High School, Postsecondary Initiatives

Thirty-four active schools in the partnership responded to the state's LOI survey in 1998. These included 19 elementary schools, five middle/junior high schools, and ten high schools. Table 4 presents responses to several indicators of involvement from this survey. Overall, as of spring 1998, nearly half (47%) of the active schools have monthly activities and over half (53%) involve at least half of their students in STW activities. These figures are substantially less than for the state overall. Nearly one-third (32%) of schools have school-wide or institutionalized activities. The range of activities (63%) is slightly below the state share (70%), while business involvement (1.3) is near the state mean (1.4).

Table 4
Level of Involvement Survey Spring 1998: Pinal County STW Partnership Active Schools

	Elementary		Middle/Junior High		High School		Total	
Indicators	Partnership	State	Partnership	State	Partnership	State	Partnership	State
Percent of schools with activities at least monthly	37%	62%	40%	75%	70%	85%	47%	70%
Percent of activities used	69%	68%	55%	75%	59%	73%	63%	70%
Percent of schools with at least 50% of students participating	56%	79%	40%	79%	70%	88%	53%	81%
Percent of schools with school-wide or institutionalized activities	24%	21%	20%	39%	56%	43%	32%	29%
Mean level of business involvement (1-3)	1.2	1.3	1.1	1.4	1.5	1.5	1.3	1.4

Groundhog Job Shadow Day was an initiative that spanned the entire partnership. The partnership had an increase of 150 students participating from last year. Job shadowing is occurring outside of the day, according to the marketing specialist.

Elementary

Career Awareness Modules have been delivered through the Pinal County School Office to all public school students in grades 5-6. Furthermore, pilot projects designed to expand the Career Awareness Modules to students in grades 1-4 have been conducted in four school systems. A model job shadowing project was conducted by Mammoth elementary school in which 40 students job shadowed as a part of Groundhog Job Shadow Day. A pilot project is being initiated in Santa Cruz Valley Union High School that will provide mentoring for elementary students. In Ray, elementary students received a mini-grant to set up a diner with the help of a local business.

According to the LOI survey, while the variety of activities offered by Pinal's elementary schools is slightly higher than for elementary schools statewide (69% versus 68%), the shares of schools offering monthly activities (37%) and involving half of the students (56%) are lower than for the state as a whole (62% and 79% respectively). When activities are analyzed, the most frequently reported are field trips and career guest speakers. Eleven schools reported using career inventories, career mentoring, class projects and training staff about career exploration. Ten schools use job shadowing, career fairs, and curriculum development. Nine schools reported using career-assisted career exploration. Notably, the share of schools offering career mentoring, career fairs, and job shadowing ranks among the highest of all partnerships.

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Middle/Junior High

One middle school initiative is the Career Awareness Modules for students in grades 7-8. These modules were put into place in previous years. Another initiative is the Microcomputer Evaluation of Careers & Academics in three districts, supplemented with work-based experiences. Summer Career Camp also serves middle school students. Florence Middle School has been funded to implement a career education project in the current year.

Only two out of five active middle schools that responded to the survey indicated that they provided monthly activities or involved more than half of students. Similarly, the range of activities, percent of schools with school-wide or institutionalized activities, and level of business involvement are also below the state average. Career inventories and field trips were reported most often followed by job shadowing and career guest speakers.

High School

The site visit included a trip to the Health Careers 2000 Project at Santa Cruz Valley Union High School. The site coordinator and teacher described the program which allows students to earn college credit in high school in health related careers. The nursing assisting program uses a variety of approaches. The students help select speakers for a career speaker forum program. In the tenth grade, students job shadow in an area related to their pathway of interest. In the eleventh grade, students participate in an internship. The students must complete a business orientation and training. The internship occurs every two or three weeks for eight hours. Each student has a portfolio which includes a pre- and a post- test, resume, interview, orientation schedule, career testing, and an evaluation of their on the job performance. Participating businesses provide immediate feedback for students, as well.

Senior students can articulate with CAC to obtain credit as a Certified Nursing Assistant. Many students gain experience by working at the Coolidge Training Center, an Arizona Department of Economic Security (DES) rehabilitation center. The program has conducted numerous evaluations and has found that academic achievement, attendance, and the rate of success on the job is higher for students involved in the program. Furthermore, retention is better in higher education as a result of their participation. The program involves employers in the development of curriculum. Due to the remote location of the school, the most difficult challenge has been the logistics of transportation to and from the school.

The Health Careers 2000 Project at Santa Cruz Valley Union High School received recognition as one of Arizona's 5-Star Outstanding Practices. The partnership also received recognition for the San Manuel Biosphere Project and Robotics and Publications projects at Ray High School. Ray High School currently is conducting a reclamation project using trees from their own greenhouse in conjunction with the ASARCO mine.

The active high schools that provided LOI survey information were more active than other grade levels in the partnership. Nonetheless, with the exception of the share of schools that have institutionalized activities (56%), they are below state averages. Activities reported by most schools included field trips, career guest speakers, career fairs, and computer-assisted career exploration. Seven schools reported career inventories and job shadowing. Five schools reported curriculum development, class projects with careers, and volunteer projects. School-based enterprises, career mentoring, internships, and apprenticeships were reported least often.

Career Counseling

The partnership has supported career counseling through involvement of counselors, training other staff, and providing materials. Three counselors participate in partnership governance: one as a board member and two as site coordinators. They have provided input to the partnership about expanding the counseling function. Furthermore, the CD Rom Occupational Outlook Handbook and similar materials have been purchased for the schools to assist in counseling students. Schools have been encouraged to adopt portfolios.

Goal 3: Technical Assistance

Ongoing Needs Assessment

The partnership has gathered information about partnership needs both through formal and informal means. A technical needs assistance survey was administered by the evaluator at the site coordinators meeting. Furthermore, reports are received from coordinators about activities on an on-going basis.

Curriculum/Assessment Initiatives
(Including Career Pathways, *K-12 Workplace Skills*, applied/contextual curriculum)

The partnership has adopted the Career Awareness Module that was put in place by the Pinal County School Office. The Robotics curriculum developed by Ray High School has also been shared with other schools.

Professional Development Initiatives
(Including business and educators)

Several targeted professional development activities have been offered to partnership personnel:

- Collaboration with the Tech Prep Coordinator of the Maricopa Unified School District led to an English Teacher Integrated Curriculum workshop.
- Career Pathways awareness workshops are being conducted for all Maricopa USD staff, and *all* districts are anticipated to receive Career Pathways workshops through ASU.
- A robotics workshop is going to be offered by a Ray High School science teacher and his Chandler-Gilbert Community College mentor.
- An Occupational Information System workshop was provided for counselors.
- Pinal County educators received training on the Career Awareness Module.
- "Communications in the Workplace" inservices have been provided to five districts through New Frontiers.

Additionally, the partnership has focused on training site coordinators. Coordinators have been involved in Parents as Partners workshops. Other opportunities for coordinators include Educator Internships.

Other Technical Assistance Activities

The partnership has participated in the Gila River Indian Community by providing a Local School STW Coordinator. In addition, two mini-grant projects involve the Gila River Indian Community. The Wastewater Apprenticeship will provide certification opportunities through an apprenticeship program. Educators also have participated in the teacher internship program.

Goal 4: Community Involvement
(Including employers and the community-at-large)

The partnership continues to involve community members through participation in local school programs. This is notable at the Accelerated Reader program at Gardner Middle School in San Manuel. Furthermore, the partnership plans on initiating the parental involvement pilot by offering teacher workshops. The public awareness efforts also support informing and involving the public in local efforts.

Business involvement has been targeted and a directory is being developed. Over 180 businesses were involved in Groundhog Job Shadow Day this year, with more small businesses involved than in the past.

Goal 5: Public Awareness

For the period July through December 1998, there were 26 presentations and five direct mailings, as well as 37 television spots and 13 newspaper articles. The partnership estimates that they made 256 student contacts, 35 parent contacts, 14 teacher contacts, 10 counselor contacts, 28 school administrator contacts, 500 business and industry contacts and 5,321 general contacts for a total of 6,164 contacts through either direct mail or presentations.

To support the public awareness efforts, an audio slide show has been developed and is presented throughout the county. A newsletter has been effective in communicating activities, according to the director. Furthermore, a web page has been developed and is being enhanced by the marketing specialist. The partnership staff tries to participate in local community initiatives in order to connect with local interests. Press coverage has been extensive as well especially during Groundhog Job Shadow Day.

Goal 6: System Evaluation

The partnership has done a number of customized evaluations and shared them with other partnerships. An evaluation of the Accelerated Learning Program and of the Health Careers 2000 program showed student outcomes as a result of participation in the STW Program. The partnership also has met the federal and state requirements for evaluation. A quarterly report of activities is compiled on an on-going basis. The partnership does needs assessments in order to plan its activities. The evaluator plans to help train site coordinators to implement "outcomes evaluations" in the schools in order to document progress.

Discussion

Partnership Assets

The partnership has a strong foundation of teacher training. Working with Tech Prep and the Pinal County School Office, the partnership has been able to present much information county-wide. Career Pathways has been promoted across the county and many schools are aware of STW philosophy. The partnership has adapted its structure to provide more local accountability and control. The use of the school site coordinators seems to have made a great difference in the adoption of STW, according to the director. The director also recognizes a shift in the level of collaboration across the county. The Intel project requires coordination between multiple school districts and holds promise in offering student internships. The agreements that have been reached thus far are evidence of collaboration. Furthermore, the number of businesses participating in shadowing and other school activities is encouraging. The evaluation efforts are advanced and offer promise for documenting outcomes which could help sustain efforts.

Partnership Challenges

The partnership is challenged to increase the depth of participation in active schools. Pinal County schools appear to provide STW activities less frequently and for a smaller share of students compared to their peers statewide. Furthermore, fewer schools recognize that technical assistance is being provided to them by the county's STW partnership compared to the state as a whole. Sustainability also is a challenge, particularly given the financial base of the communities and the lack of a clear plan to address the issue.

Summary and Suggestions

Suggestions for consideration by the partnership include:

The partnership should readdress sustainability and identify the elements that should be sustained. They should also identify partners who could provide additional support. For example, a method to share the business directory, which is now used as a mailing list, could be discussed and ways to maintain and distribute the list could be discussed.

The partnership should continue to offer support and training to site coordinators. The coordinators have been described as one of the key elements of sustainability.

Documentation of student outcomes should continue to be used to help promote the partnership and to show other programs how to collect and use information to help improve programs.

Strategic funding decisions should consider the priorities which are established as a part of the sustainability discussion.

Analyses of schools' "Level of Involvement" survey results should be used to generate ideas for increasing and strengthening the participation of schools.

Yavapai County STW Partnership

Site Visit: March 12, 1999

Region Served: Yavapai County in the north-central area of the state

FY 1995-96 funding:	$ 252,692
FY 1996-97 funding:	389,649
FY 1997-98 funding:	272,488
FY 1998-99 funding:	234,366
Total investment to date:	$1,149,195

School Profile

The Yavapai County School To Work (STW) Partnership serves a predominantly rural area. Prescott is the largest town served by the partnership. There are 67 schools or programs in 20 districts within the partnership including eight unified districts, ten elementary districts, a unified high school district, and charter schools. The percent of children age 5-17 in families in poverty is lower (18%) than the state overall (22.1%).

More than 23,000 students in grades kindergarten through 12 were enrolled in the Yavapai Partnership schools in the 1998-99 school year as shown in Table 1.

Table 1
Total Student Enrollment for the Yavapai County STW Partnership (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)*
Grades Pre-K through 6	12,773
Grades 7 through 8	3,733
Grades 9 through 12	6,800
Ungraded Elementary (K-8)	70
Ungraded Secondary (9-12)	21
TOTAL	23,397

*Note: Enrollment data reflect 62 schools for which data were available of the 67 public schools identified in this partnership.

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

Yavapai County is a predominantly rural area. Prescott, Sedona, Cottonwood, Camp Verde, Ash Fork, and Seligman are small communities with a variety of small businesses. The area has attracted many retirees and hosts many tourists. Businesses are represented in the Minerals and Mining, Tourism, Senior Living, Tourism, and Transportation and Distribution GSPED clusters. Public sector employers are also important in the region.

The economic health of the local economies varies significantly. Some communities, such Prescott and its surrounding areas, have experienced phenomenal growth. Sedona is a fairly affluent area and also has grown significantly. Other towns, such as Ash Fork, have few businesses and decl ning populations.

Goal 1: System Governance and Partnership Development

Partnership Governance and Staff

A board, local oversight teams, school liaisons, and partnership staff all play key roles in partnership governance.

The director describes the board as active and effective. The board has both business and education membership. Two major employers have recently joined the board. However, the partnership is still seeking additional GSPED representation. Processes have become more formalized due to incorporation as a 501(c)(3). The board meets quarterly to chart the strategic direction for the partnership and to allocate funds to participating districts (local oversight teams). A mini-grant process used in the past has been replaced by a formula-based method for allocating funds. Local plans are submitted to the board and, after approval, funds are allocated based upon student counts rather than on a per project basis.

Each local oversight team is comprised of district administrators, board members, teachers, parents, and business people. They establish their own strategic direction through a planning process promoted by the partnership. Thus far, 11 communities have developed a strategic plan. Camp Verde will soon be joining the partnership.

School liaisons receive stipends to provide technical assistance and support implementation of the local oversight team plan. There are approximately 45 liaisons representing 55 schools. At least one liaison is the key point-of-contact within each district. In some larger districts, there is a liaison at each school and a district coordinator. A representative from the Small Rural Schools Consortium supports activities in four small rural districts.

Liaisons meet twice each month. Each meeting has a theme based on the interest of the group and a field experience in a business (e.g., a mine, Printpac manufacturer, college career fair). On average, 25 attend the bi-monthly liaison meetings. Activity has increased since September of 1998, according to the director. The liaison team has demonstrated "ownership, energy and commitment" and frequently have a "laundry list" of activities to share with each other during the meetings.

The partnership staff is charged with administrative, marketing, fund-raising, and coordinating functions. The partnership director has reduced her time charged to STW and is partially funded through Yavapai College for teacher training. She also has shouldered the responsibility for grant writing and seeking alternate sources of funding for the partnership. A marketing specialist is still under contract and evaluation services are contracted, as well.

Sustainability

The partnership has adopted several strategies to maintain STW beyond the life of federal funding. The board has incorporated as a 501(c)(3) in order to be able to raise funds to continue to support community efforts. Local participation is encouraged and other sources of funding and collaboration have been pursued.

The partnership encourages local ownership of STW through the strategic planning process. Site-based planning builds local capacity and makes local communities responsible for implementing action plans to meet local goals. Furthermore, districts must show in-kind contributions to support the STW effort in order to receive funding. The requirement for 50% matching funds, referenced in the FY 1997-98 site visit report, has not been adopted.

The partnership has actively sought additional sources of funding and has collaborated with other organizations. A grant was received from the U.S. Department of Justice to research and develop an intervention to reduce conflict in public schools. The grant provides conflict resolution, SCANS skills, and career awareness to junior high students. The leadership component provides high school students with facilitation training and work-based experiences. Students lead focus group discussions with middle school teachers, parents, and students. Funding also was received to support equity training for county teachers from the Arizona Department of Education.

Goal 2: Program Coordination and Integration

Program Coordination and Integration

The partnership coordinates with a number of community-based organizations. For example, the partnership will participate in a Teen Maze event sponsored by Youth Count, the Teenage Pregnancy Prevention Program, and the Yavapai County Health Department. The maze activity is designed to have teens explore the potential effects of life choices in career and vocational opportunities, substance abuse, teen pregnancy, and related issues. The partnership will help prepare a simulation related to career choices. The county government co-sponsored Groundhog Job Shadow day with the partnership.

Career Pathways has been introduced to schools across the partnership through the "CAREERstorm" game. The game, developed by partnership staff, is a teaching tool that links Arizona's Career Pathways with GSPED industries. Thirteen of 18 (72%) schools who responded to a related question on the state's "Level of Involvement" (LOI) survey in spring 1998 indicated that they organized at least some of their career exploration activities around Career Pathways.

Linkages with higher education have been strengthened during the year, according to the director. The community college continues to offer training to teachers and to provide office space for the partnership. Furthermore, the coordinators have been provided internship opportunities, and new alliances with the Technology Division are being pursued. Embry Riddle Aeronautic School is starting a math-science magnet school.

Universal Access:
School Participation and Roll-out Strategy

For FY 1998-99, data were collected from each partnership regarding the status of schools considered to be "active" within their region. "Active" schools are defined as those which formally partner with the regional STW partnership and which involve at least some of their students in STW activities as described on the national *Progress Measures* (see Appendix A). Of the public schools and programs identified, 51 schools/programs (76%) are active. Active schools are listed in Table 2.

The number of districts with funded implementation plans has expanded from five districts in the prior year to 12 districts as of March 1999. The director anticipates that Camp Verde will soon be joining the partnership. All districts will then be involved except Mingus. The director believes that the partnership is well-placed to promote STW to more schools due to the variety of technical assistance that they now offer, including conflict resolution and strategic planning.

Table 2
"Active" School Participation for the Yavapai County STW Partnership

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active" Schools (FY 1998-99)					
	E/J	M/J	J/S	K-12	Total	E/J	M/J	J/S	K-12	# Total	% Total
Ash Fork USD	1		1		2	1		1		2	100
Bagdad Unified	1		1		2	1		1		2	100
Beaver Creek ESD	1				1	1				1	100
Camp Verde Unified	1	1	1		3	1	1	1		3	100
Canon ESD	2				2	2				2	100
Chino Valley Unified	2		1		3	2		1		3	100
Clarkdale-Jerome ESD	1				1	1				1	100
Cottonwood/Oak Creek ESD	3	1			4	3	1			4	100
Crown King ESD	1				1	1				1	100
Humboldt Unified	5	2	1		8	5	2	1		8	100
Kirkland ESD	1				1	1				1	100
Mayer ESD	1		1		2	1		1		2	100
Mingus UHSD			1		1			1		1	100
Prescott Unified	5	2	1		8	5	2	1		8	100
Sedona-Oak Creek Joint Unified	2		1		3	2		1		3	100
Seligman Unified	1		1		2	1		1		2	100
Skull Valley ESD	1				1	1				1	100
Yarnell ESD	1				1	1				1	100
Charter School	10	1	8	2	21	2		3		5	24
TOTAL	40	7	18	2	67	32	6	13	0	51	76

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

Table 3 details some of the types of involvement of active schools, according to the state's LOI survey conducted in Spring 1998. The LOI survey describes school involvement in STW. This survey was used at the partnership level to help plan technical assistance and roll-out strategies and provides a state-wide indicator of systems change. The survey, designed by a team of regional evaluators, incorporated concepts from the national *Progress Measures* survey. Areas measured include: depth of school participation in terms of the student population served and the degree to which STW concepts are institutionalized in the school; curriculum, assessment, and instructional practices; level of business involvement and relationship to GSPED cluster industries; and affiliation with the local/regional partnership.

As shown in Table 3, most active schools (86%) reported receiving technical assistance and more than half of them received funding (57%) and participated in local or regional STW planning (51%). The share of schools reporting technical assistance (86%) is higher than reported for the state as a whole (73%).

Table 3
Type of Active School Participation: Yavapai County STW Partnership

Level of Involvement School Survey-Spring 98	Active Schools			
	Partnership		State	
	N	%	N	%
Participate in local/regional STW planning	18	51%	140	50%
Receive technical assistance	23	86%	203	73%
Receive funding	20	57%	135	48%
Other unspecified	3	9%	23	8%
Total that responded to this question*	35	100%	280	100%

* May be counted in more than one category

Integration with One-Stop Career Centers

The Yavapai Employment Services (YES, formerly the county's One-Stop Career Center) is a centralized resource for persons seeking employment and to develop career awareness and job seeking skills. The relationship between YES and STW is on-going. The YES Director was an original staff member for STW and has delivered a workshop for the STW liaisons explaining YES services. One district had YES staff conduct day-long job readiness activities for all ninth grade students.

The partnership with the Job Training Partnership Act (JTPA) program has been strengthened over the past year, according to the director. The board chair of JTPA is on the STW board. There has been discussion of STW participating in the Youth Council (required for JTPA under the new Workforce Investment Act of 1998) and the STW director participated in the JTPA retreat. A joint proposal to fund summer youth employment was submitted but not funded.

Dialog continues with the Prescott Valley Economic Development Foundation, the Private Industry Council (PIC), workforce development programs offered through Yavapai College, and Vocational Rehabilitation.

Targeted Access for Special Populations

The partnership estimates that up to half of the students in the county are "special needs" students. The equity team has been active in developing strategies and training teachers to meet the needs of students. Training has been provided to the liaison network. An equity resource center is housed in the STW partnership office. The partnership plans to continue to train teachers to help reach all students.

STW Elementary, Middle, High School, Postsecondary Initiatives

The director indicated that there has been growth in the number and type of activities involving students over the past year. Groundhog Job Shadow Day is one highlight of partnership-wide activities. The county government co-sponsored Groundhog Job Shadow Day with the partnership. Almost 600 children participated compared to 150 in the previous year. The county government sent a letter to all Social Studies teachers notifying them of opportunities to job shadow a county employee or an elected official.

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Table 4 summarizes LOI data that illustrate the nature of STW activities across grade levels. LOI survey results indicate that 90% of Yavapai's active schools involve least half of students compared to 81% statewide. The variety of activities is similar to the state as a whole. However, relatively fewer schools (22%) have school-wide or institutionalized activities compared to the state average (29%). Business involvement (1.5) is slightly higher than the state average (1.4).

Table 4
Level of Involvement Survey Spring 1998: Yavapai County STW Partnership Active Schools

	Elementary		Middle/Junior High		High School		Total	
Indicators	Partnership	State	Partnership	State	Partnership	State	Partnership	State
Percent of schools with activities at least monthly	71%	62%	75%	75%	100%	85%	80%	70%
Percent of activities used	66%	68%	93%	75%	81%	73%	73%	70%
Percent of schools with at least 50% of students participating	88%	79%	75%	79%	100%	88%	90%	81%
Percent of schools with school-wide or institutionalized activities	21%	21%	25%	39%	23%	43%	22%	29%
Mean level of business involvement (1-3)	1.1	1.3	1.0	1.4	1.4	1.5	1.2	1.4

Elementary

Overall, 80% (32 out of 40) of the partnership's elementary schools are active. Twenty-four elementary schools participated in the LOI survey. Table 4 shows that a relatively greater share of elementary schools involve at least half of their students (88%) and conduct activities at least monthly (71%) when compared to the partnerships as a whole. Less than one-fourth (21%) of the elementary schools have institutionalized activities. The range of activities is lower (66%) than reported for the state (68%). Most frequently reported activities for elementary schools are: career guest speakers, field trips, class projects, curriculum development, school-based enterprises, and career inventories. The partnership ranks first among all regional partnerships in the share of elementary schools that develop curriculum. One elementary program has been recognized as an Arizona 5-Star Outstanding Practice: the Seligman Elementary School Wee Deliver program.

Middle/Junior High

Six of seven (86%) middle schools are active, and four active middle schools responded to the level of involvement survey. Yavapai's middle/junior high schools differ notably from their statewide peers in terms of offering a wider range of activities (93%) and having a smaller percentage of schools reporting institutionalized activities (25%). According to partnership statistics, 70% of middle school students attended career presentations given by community members, 42% of middle school students went on business field trips, and 55% of students participated in job shadowing. The Prescott Unified School District implemented Project Pride, a service learning program. Heritage Middle School was recognized for its radio station as one of Arizona's 5-Star Outstanding Practices.

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High School

Thirteen out of 18 high schools are active (65%), and all 13 responded to the LOI survey. As shown on Table 4, all of the schools reported activities at least monthly, involving at least half of the students. When compared to the state, the schools have a wider variety of activities and a relatively greater share of schools involve more than half of the students and at least monthly. However, relatively fewer reported that activities are institutionalized. All of the schools reported computer-assisted instruction. Field trips, career guest speakers, and career fairs were reported in all but one school. Job shadowing and class projects with careers were reported by 82% of the schools. Career inventories and staff training was reported by 73% of schools. Career mentoring, school-based enterprises, and curriculum development were reported by the fewest schools (64%). Prescott High School was recognized for Chefs of the Future and for the Youth Page in the Courier. Ash Fork High School was recognized for their workplace readiness class.

During the site visit, Bradshaw High School was visited. The STW liaison described STW. All students are introduced to Career Pathways as freshmen. Throughout their high school experience, they are able to assess their career interests and develop workplace and job seeking skills. Each child develops a five-year plan and is given career guidance. Resume, job application, and workplace skills are taught. Students are encouraged to job shadow as a part of the school experience. A group of vocational students at the school are building a house in collaboration with Habitat for Humanity. The students learn in the classroom and then apply it "on the job." Other projects at the school include a greenhouse construction project, a school-based enterprise run by the special education students, and computer curriculum matching business applications. The Youth Transition Project has constructed a large replica of the "CAREERstorm" game and uses it to teach students about Career Pathways and their relationship to GSPED industries.

Career Counseling

The partnership uses Yavapai College as a resource to help students plan articulation to Yavapai College. STW will help refer classroom teachers to the community college resources at the college. The partnership has encouraged attendance at the Arizona Department of Education's Counselor's Academy. Furthermore, the partnership supports the use of the Occupational Information System (OIS) and provides training to help teachers and counselors be more effective in assisting students.

Goal 3: Technical Assistance

Ongoing Needs Assessment

The partnership has placed a renewed emphasis on evaluation of outcomes for each local planning area. An analysis of activities by district has been conducted. The activities were crosswalked against the original plan for the local area. The analysis provides a benchmark by which to measure progress and helps to plan technical assistance. The local oversight teams will be using this information to help shape efforts to meet their goals and the board will tie funding next year to the accomplishment of goals. The information helps the board hold districts accountable for the plans that they have developed and will help allocate funds towards those that are most effective.

Curriculum/Assessment Initiatives (Including Career Pathways, *K-12 Workplace Skills*, applied/contextual curriculum)

The partnership continues to distribute the "CAREERstorm" game. The game is a visual tool to explain how Arizona's Career Pathways interact with GSPED clusters and how both can be used to help students

make career choices. Information about SCANS and/or *K-12Workplace Skills* also is provided to schools through the liaison network.

Professional Development Initiatives
(Including business and educators)

Professional development initiatives have been incorporated into training offered through Yavapai College. The director of STW provides workshops for teachers in 1-3 day workshops at the college. The extended learning division pays the instructor and supports teacher tuition. Teachers get credit applicable to their certification requirements. Topics include community service, justice, equity, and conflict resolution.

Equity training, (1, 3, or 6 hour courses) are paid for by the equity grant and are offered to districts throughout the partnership. Furthermore, the partnership has attempted to develop internal capacity by conducting a training of trainers workshop for liaisons. Other training supported by the partnership includes a multiple intelligences workshop conducted by a charter school principal. Training teachers to use the "Turning Earning into Learning" program developed through the Northwest Regional Educational Laboratory has also been offered. The program helps teachers use students' after-school jobs as a part of the workplace readiness curriculum. An elementary STW methods class was also offered.

Other Technical Assistance Activities

The partnership continues to work with the Yavapai Prescott Tribe and to support STW activities in this community. The partnership sent two parents from the Yavapai Prescott tribe to a conference sponsored by Parents As Partners.

Goal 4: Community Involvement
(Including employers and the community-at-large)

The strategies to increase business and parental involvement have not been as successful as envisioned, according to the director. The director has worked with a number of community groups to expand the support for STW. Business involvement has been encouraged through the creation and distribution of a directory of employers willing to participate in school programs. However, the schools have not been ready to engage businesses at the same time. The partnership tried to start a parent sub-committee and a student group. However, the participation was thin and the goals were not well-defined. Parent brochures have been created and will be distributed through the liaisons. Youth Counts has a student advisory group that the director feels could be used to support STW. Furthermore, the partnership will support an "Adopt-a-School" model to encourage engagement.

Goal 5: Public Awareness

For the period July through December 1998, there were six presentations and two direct mailings, as well as 33 newspaper articles. The partnership estimates that they made 40 teacher contacts, 35 counselor contacts, 2,325 business and industry contacts and 30,000 general contacts for a total of 32,400 contacts through either direct mail or presentations.

Goal 6: System Evaluation

The partnership continues to participate in federal and state evaluation requirements. They have also collected metrics on each local partnership and have developed an accountability system. Schools have

also been encouraged to develop outcome measures to help measure success. The evaluator worked with individual programs to document outcomes.

Discussion

Partnership Assets

The Yavapai County STW Partnership has been aggressive in their outreach to community partners. The partnership has a good track record of building relationships and participating in a variety of initiatives. The partnership has been able to involve most schools on some level in the planning process. Furthermore, "Level of Involvement" data for Yavapai's active schools suggests that these schools are at or above state averages in most areas. The director feels that the components of the partnership that will sustain it are the liaisons, the relationship with the college and the strategic planning process.

Partnership Challenges

Improving the relationship between teachers and businesses is the key challenge facing the partnership, according to the director. Teachers appear fearful of involving business in the classroom. For that reason, according to the director, more interaction is not occurring. State LOI survey results support that engaging businesses is an area in which the partnership might want to direct attention. According to the survey results, the mean level of business involvement in the Yavapai County STW Partnership (1.2) is lower than for the state overall (1.4).

The partnership also faces a challenge in building community involvement. The parent and student committees envisioned in the previous year were not successful. Strategies such as community recognition dinners have not been as successful as the director would have liked.

Helping schools to broaden and institutionalize the activities that they have started is also a challenge. The share of schools who have school-wide or institutionalized activities is lower than the state as a whole.

The integration of academic and vocational curriculum is a challenge faced by all partnerships.

Summary and Suggestions

The partnership should continue to pursue the accountability strategy that it has begun. The evaluation of communities in terms of their original goals will help allocate funds, focus technical assistance, and will strengthen the abilities of communities to assess their own progress.

Opportunities for collaboration should be pursued. However, the link to STW should be clearly articulated. Maintaining partnership identity and partnering with multiple initiatives is a challenge.

Planning for sustainability should be conducted with the input of the liaison team, since they are a key part of the future. Strategies to increase business engagement and collaboration between businesses and schools should also be pursued.

Strategies to encourage institutionalization of STW within schools should be developed. Local planning teams should address areas within their own districts to further the involvement of schools.

Yuma/La Paz STW Partnership

Site Visit: February 9, 1999

Region Served: Yuma and La Paz Counties in southwestern Arizona.

FY 1995-96 funding:	$ 302,872
FY 1996-97 funding:	393,102
FY 1997-98 funding:	266,864
FY 1998-99 funding:	229,076
Total investment to date:	$1,191,914

School Profile

The Yuma/La Paz School To Work (STW) Partnership serves students in 16 public school districts, charter, private, and other schools in two counties. The schools represent diverse communities in a largely rural area. Eight of the school districts have only one school. The percent of children age 5-17 in families in poverty is higher than the state average (22%) in both counties (Yuma- 29%; La Paz- 32.7%) The partnership area has 65% Hispanic students which is nearly double the share reflected in the state as a whole (32%).

Table 1
Total Student Enrollment for the Yuma/La Paz STW System (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)*
Grades Pre-K through 6	16,657
Grades 7 through 8	4,827
Grades 9 through 12	9,108
Ungraded Elementary (K-8)	40
Ungraded Secondary (9-12)	170
TOTAL	30,802

*Note: Enrollment data reflect 57 schools for which data were available of the 61 public schools identified in this partnership.

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

Predominant employers in the two-county area include governmental entities and businesses categorized in the Food, Fiber and Natural Products, Tourism, Senior Living, Transportation and Distribution, Bioindustry, and High Tech GSPED clusters. The mild winter climate supports a variety of agricultural enterprises including salad processors. The area also is attractive to retirees and winter visitors who rely on businesses in health care, construction, and financial services. Furthermore, due to proximity to Mexico and California, Yuma is a major distribution center. The economic health of the region is challenged by a relatively high rate of unemployment and a limited number of high paying jobs.

Goal 1: System Governance and Partnership Development

Partnership Governance and Staff

The STW partnership is governed through a board and partnership staff, and is supported by a cadre of site coordinators within the local schools. The system has been effective in promoting the development of a STW system within the two-county area, according to the director.

The board mission has remained constant since the prior year. However, the composition of the board has been strengthened. Vacancies have been filled with business and education representatives from La Paz County. The strategic plan initiated in the prior year continues to be implemented and refined with input from stakeholder groups. The partnership also has strengthened the governance structure by adopting a charter and holding monthly board meetings through the Interactive Television Network which eliminates the need for the two-hour commute between sites. The board is described by the partnership director as extremely effective and influential.

Partnership staff include a director, marketing coordinator/evaluator, and secretary. Staff are very supportive of one another and continue to have a good working relationship. As of the beginning of the fourth year of federal funding, the evaluation function was assumed by the marketing coordinator.

The site coordinator cadre continues to grow and to be effective in supporting programs within schools, according to the director. Cadre members serve in local schools to help market STW, train school staff, modify curriculum and instructional strategies, mentor staff, participate on task forces, attend professional development meetings, collect data, and communicate information on partnership activities. Approximately 70 cadre members now participate compared to 41 in the previous year. Cadre members participate without a stipend. The director characterizes the cadre as a very effective group with sometimes fluid membership due to the competing demands placed upon teachers.

The partnership has facilitated meetings and distributed agendas, minutes, and other follow-up materials to develop the cadre. During the previous year, cadre meetings were held at various schools to encourage a sense of shared ownership and leadership within the group. In order to expand business involvement, meetings are now held at local businesses. The next meeting was to be held at the Gowan Company. Parallel meetings are held in Yuma and La Paz counties. The director indicated that this has encouraged participation in both communities. The cadre meetings are held within a two-day period so that both groups get the same information, yet are able to address their own unique issues. A toll-free telephone number was established to help facilitate communication between the distant communities.

Sustainability

The active pursuit of partners continues to be the primary strategy to promote sustainability. The director frequently asks the question, "Who else can we involve? Who else serves the same population?" Business participants are recruited in order to insure that activities will continue beyond the life of the federal funding. The partnership also seeks to deepen the level of involvement of existing educational and community partners. It is hoped that as partners become more engaged they will assume more responsibility for sponsoring career awareness activities for students. For example, six entities funded a Non-Traditional Careers Conference involving 20 organizations. Northern Arizona University (NAU) has agreed to sponsor teacher internships. Other joint ventures, such as a summer youth program, have been successful in providing services to students and coordinating existing resources. A funding stream analysis continues to be a goal to identify other partners. All projects funded through the partnership are required to have a plan for sustainability.

There continues to be evidence of sustainability of STW due to the institutionalization of practices in local districts. Many activities do not depend upon STW partnership funding or support. Furthermore, many participants are highly involved without compensation. The willingness of individuals and groups to support STW attests to the durability of the philosophy. However, the director indicated that the partnership structure, as it currently exists, could not be supported without additional funding sources.

Goal 2: Program Coordination and Integration

Program Coordination and Integration

Collaboration with a variety of partners continues to be emphasized within the partnership. Several initiatives including the summer academies and the non-traditional careers conference rely upon coordination between numerous educational and community agencies. The One-Stop Career Center and Job Training Partnership Act (JTPA) programs continue to partner with the STW partnership to provide summer employment opportunities for youth. The director feels that substantial progress has been made in increasing the level of involvement of partners and in serving more students through these joint efforts.

Coordination between schools also was encouraged through the sponsorship of two integrated K-12 GSPED pilot projects. The projects require vertical integration between districts, career portfolios, and expansion of Career Pathways across grade levels. It is hoped that these projects will illustrate how programs can be developed across grade levels to support one another in meaningful ways and encourage coordination between districts.

Career Pathways, an initiative sponsored by the Arizona Department of Education, has been incorporated into the STW philosophy. Career events and materials have incorporated Career Pathways. Career Pathways also are incorporated in the GSPED projects. However, there has been little change over the prior year in the number of districts who have adopted the model. According to the director, many schools have redirected their efforts to meet the requirements of the state's AIMS standardized tests. Slightly more than half of the active schools surveyed in 1998 reported that at least some activities were organized around Career Pathways.

Strong linkages with postsecondary institutions already exist, according to the director. Over the past year coordination with partners from higher education has been strengthened. Examples include the adoption of teacher internships as a part of the NAU curriculum, and the increased involvement of Arizona Western College (AWC) in career fairs and summer career academies.

Universal Access:
School Participation and Roll-out Strategy

For FY 1998-99, data were collected from each partnership regarding the status of schools considered to be "active" within their region. "Active" schools are defined as those which formally partner with the regional STW partnership and which involve at least some of their students in STW activities as described on the national *Progress Measures* (see Appendix A). As of March 1999, thirty-five public schools (57%) are active. Active schools are outlined in Table 2.

Roll-out strategies have become more focused during the past year, according to the director. Due to reduced funding, strengthening existing elements has been emphasized rather than initiating new activities. However, the partnership has continued to encourage participation through the distribution of information to cadre members and sharing between districts. A special effort was made to contact principals of inactive schools through mailings to inform them of cadre and partnership activities.

Table 2
"Active" School Participation for the Yuma/La Paz STW Partnership

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active" Schools (FY 1998-99)					
	E/J	M/J	J/S	K-12	Total	E/J	M/J	J/S	K-12	# Total	% Total
Antelope UHSD			1		1			1		1	100
Bicentennial UHSD			1		1			1		1	100
Bouse ESD	1				1	1				1	100
Crane ESD	8	4			12	1	2			3	25
Gadsden ESD	2	1			3	1	1			2	67
Hyder ESD	1				1	1				1	100
Mohawk Valley ESD	1				1	1				1	100
Parker USD	3		1		4	3		1		4	100
Quartzsite ESD	2				2	2				2	100
Salome ESD	1				1	1				1	100
Somerton ESD	3	1			4		1			1	25
Wellton ESD	1				1	1				1	100
Wenden ESD	1				1					0	0
Yuma Accommodation		1	3		4		1	2		3	75
Yuma UHSD			4		4			4		4	100
Yuma ESD	12	3			15	3	2			5	33
Charter Schools			5		5			4		4	80
TOTAL PUBLIC SCHOOLS	36	10	15		61	15	7	13		35	57
California	1	1	1		3	1		1		2	67
Department of Youth Treatment			1		1			1		1	100
Private Schools			1		1					0	0
TOTAL	37	11	18		66	16	7	15		38	58

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

Table 3 details active school participation in the partnership, according to the state's "Level of Involvement"(LOI) survey conducted in Spring 1998. The LOI survey describes school involvement in STW. This survey was used at the partnership level to help plan technical assistance and roll-out strategies and provides a state-wide indicator of systems change. The survey, designed by a team of regional evaluators, incorporated concepts from the national *Progress Measures* survey. Areas measured include: depth of school participation in terms of the student population served and the degree to which STW concepts are institutionalized in the school; curriculum, assessment, and instructional practices; level of business involvement and relationship to GSPED cluster industries; and affiliation with the local/regional partnership.

Only active public schools (those who have implemented student STW activities and formally partner with the regional partnership) are included in Table 3. When asked to describe how the school is associated with the regional partnership, more than half (58%) of the nineteen active schools who responded to this question said that they are involved in local or regional planning. This may reflect the partnership strategy of facilitating cadre meetings in order to promote school engagement. Only one school reported receiving direct funding.

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Table 3
Type of Active School Participation: Yuma/La Paz STW Partnership

Level of Involvement School Survey-Spring 98	Active Schools			
	Partnership		State	
	N	%	N	%
Participate in local/regional STW planning	11	58%	140	50%
Receive technical assistance	8	42%	203	73%
Receive funding	1	5%	135	48%
Other unspecified	3	16%	23	8%
Total that responded to this question*	19	100%	280	100%

* May be counted in more than one category

Integration with One-Stop Career Centers

The YPIC (Yuma Private Industry Council) and the One-Stop Career Center have been active partners over the past year. Access for all students is supported through collaborative efforts with the One-Stop Career Center in Yuma and workforce development entities. STW materials are distributed through the One-Stop Career Center and students are able to use the center for career exploration. As in the past, the Yuma One-Stop Career Center and the YPIC worked with STW to provide summer youth employment opportunities. The YPIC conducted eligibility assessment for students. Students not eligible for JTPA were referred to the Pledge-A-Job program. The Arizona Department of Economic Security (DES) provided workshops for students in the Pledge-A-Job program. The YPIC director is involved in planning the summer activities.

Targeted Access for Special Populations

Special populations are served by virtue of the inclusion of charter schools serving at risk youth, accommodation district schools, and the Yuma Youth Center. In order to assure that new projects will address these students, the GSPED pilot projects are required to plan to serve special populations. The partnership partners with the WORC center which serves mentally and physically disabled youth and adults. The partnership contracts with them to provide mailing services to the partnership.

STW Elementary, Middle, High School, Postsecondary Initiatives
(Including School-based, Work-based and Connecting Activities)

The partnership has supported schools in developing STW programs by supporting the cadre and promoting best practices. According to the director, the primary new initiative sponsored by the partnership during the year was the establishment of a GSPED pilot project in both counties. Three schools (an elementary, a middle school and a high school) are coordinating activities to provide a model for integrated K-12 STW programs. The partnership also was highly involved in Groundhog Job Shadow Day. Nearly 375 students participated in job shadowing due to a collaborative effort of the partnership and active schools.

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Twenty-four active public schools responded to the LOI survey in spring 1998. According to this survey, 58% of the schools conducted career awareness, exploration, or preparation activities at least monthly. More than two thirds (68%) of schools reported that a majority of students participated in an activity during the year. However, schools most often characterized activities as one-time events facilitated by individuals or groups rather than school-wide events. Table 4 provides details of the extent of involvement as measured by the spring survey.

Elementary

Of the 42% of public elementary schools that are active in the partnership, 11 responded to the LOI survey and described STW activities in the school as a whole. Career inventories, field trips, and career guest speakers were reported by nearly three-fourths of the reporting schools. Career mentoring and class projects with careers also were mentioned by at least half of the schools. According to the director, many elementary teachers attend the cadre meetings and share their successes. One such successful program—The Farm Project at Rancho Viejo Elementary School—was recognized as an Arizona 5-Star Outstanding Practice in 1998.

Middle/Junior High

Of the 70% of middle/junior high schools that are active in the partnership, five responded to the LOI survey. LOI results indicate that these schools participate in more types of activities (75%) than both elementary and high schools. These schools also report conducting more activities involving at least half of their students than their elementary and high school counterparts. And, activities are reported to occur monthly more so than in the elementary and high schools in the partnership. The most frequently occurring activities include career inventories, field trips, career guest speakers, career mentoring, job shadowing, class projects, school-based enterprises, career fairs, and computer-assisted career exploration. Other supporting activities reported by a majority of schools include staff training and curriculum development. According to the director, career inventories are given as a part of preparation for high school and to help students select classes.

Students at the 4th Avenue Junior High School's Career Class were observed during the site visit. The school was recognized as being one of Arizona's 5-star Outstanding Practices and is part of the GSPED pilot project. The school has created a Career Academy—a school-within-a-school. Students are given work experiences within the school and in the adjoining elementary school. Students report to work sites for one class period every day. In addition, students have a career exploration class during which they complete a Career Portfolio which includes an interest inventory and receive instruction in life skills, workplace skills, and career exploration.

During the visit, students were busy preparing displays for an upcoming Career Fair with the feeder elementary school. The students had researched a career of interest and gathered information to share with younger students. Students had a variety of career interests and were actively engaged in the project. According to the teacher, the students enjoy mentoring younger students and the Career Fair is a good vehicle to ensure student interest in career exploration. Several of the girls were exploring non-traditional careers. Students had definite ideas of their career interests. Several students discussed their experiences in working in the elementary school. They were quite proud of their accomplishments. One teacher takes the responsibility for placing students in a job experience at the feeder school. According to the teacher, there are very few students who can not take advantage of the experience. The elementary school teachers have become very satisfied with the older students and the help that they provide. Feedback regarding the students job performance is shared frequently. This school is one example of an integrated project

between the elementary and middle schools. Both students and teachers were enthusiastic about their activities and saw the value of applying academic learning in real life situations.

Somerton Middle School, another example of a successful STW project, was recognized as an Arizona 5-Star Outstanding Practice. The school has implemented career portfolios starting in the sixth grade and continuing into the high school. Career exploration is integrated into the academic curriculum throughout the school.

High School

Of the 87% active high schools in the partnership, eight responded to the LOI survey. More than half of the active high schools reported field trips, class projects with careers, job shadowing, and career fairs. Four out of eight schools reported career inventories, career guest speakers, and volunteer projects. Three-fourths of the high schools that responded had activities on at least a monthly basis. Six of eight schools indicated that they facilitate work experiences for some of their students. Only one school reported more than half of the students participating. Nearly all schools (seven out of eight) have some mechanism to help students transition to postsecondary institutions.

The partnership supports high school student participation in STW through a variety of initiatives including Summer Academies, a Non-Traditional Careers Conference, and integrated GSPED pilot projects. Summer Academies provided intensive activities in one of five areas: Medical Laboratory, Environmental Science, Web Page Design and Development, Law Enforcement, and Hospitality. Two-thirds of the 75 students who attended said that school seemed more important as a result of the career academy. The AWC Career Exploration Fair '98 served over 2,800 students with a variety of workshops and presentations. Students were able to meet with local business people and attend workshops on job readiness, resumes, and employability skills. The partnership also helped place high school youth in work programs. In addition to Groundhog Job Shadow Day, the Pledge-A-Job program served 60 students in internships or paid work experiences over the summer of 1998. Another high school program supported by the partnership is the Technology Challenge (a VICA skills competition).

Table 4
Level of Involvement Survey Spring 1998: Yuma/La Paz STW Partnership Active Schools

	Elementary		Middle/Junior High		High School		Total	
Indicators	Partnership	State	Partnership	State	Partnership	State	Partnership	State
Percent of schools with activities at least monthly	27%	62%	100%	75%	75%	85%	56%	70%
Percent of activities used	55%	68%	75%	75%	56%	73%	60%	70%
Percent of schools with at least 50% of students participating	56%	79%	100%	79%	63%	88%	68%	81%
Percent of schools with school-wide or institutionalized activities	0%	21%	20%	39%	38%	43%	17%	29%
Mean level of business involvement (1-3)	1.1	1.3	1.6	1.4	1.5	1.5	1.3	1.4

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Career Counseling

The partnership encourages counselor participation in workshops, cadre meetings, and summer internship opportunities. Counselors are also given access to the materials and technical assistance from staff. Furthermore, staff have assisted Yuma counselors in administering interest inventories and conducting orientation for junior high students.

Goal 3: Technical Assistance

Ongoing Needs Assessment

Ongoing needs assessment occurs through both meetings and periodic surveys. As a follow-up to the strategic planning process, the evaluator contacted and interviewed key stakeholders in the partnership. This information was used to develop the plan and to help initiate discussions for the current planning cycle. Furthermore, the information gathered from the state's LOI surveys and student surveys has been used to refine objectives.

Strategic planning and surveying key participants continues to be an important component of the partnership philosophy, according to the director. The use of a survey to determine technical assistance needs has been conducted for two years. Other surveys, including student surveys, and the local 5-Star data collection process have proven to be effective, according to the director. Finally, cadre meetings continue to provide the venue for collecting and communicating information.

Curriculum/Assessment Initiatives (Including Career Pathways, *K-12 Workplace Skills*, applied/contextual curriculum)

Implementation of existing curriculum has been encouraged through the development of a lending library and through direct sharing of practices at the cadre meetings. Furthermore, the GSPED pilot projects require that curricular frameworks be built. It is hoped that these efforts will be replicated within other districts in the partnership. Assessment initiatives, such as the use of portfolios, have been encouraged through the partnership. The partnership has produced and distributed portfolios for use by students in grades 9-12. Portfolios are planned for grades 5-8 as well.

Professional Development Initiatives (Including business and educators)

Overall, technical assistance has been planned using the results of needs assessment surveys. Educators and counselors have been the main focus of training efforts. A "Career Pathways" workshop was offered to cadre members, teachers, counselors and administrators. NAU has sponsored teachers for summer internships in local businesses. Participation in the program has grown. Aside from these opportunities, the partnership has not had resources to conduct extensive training sessions and has found it challenging to schedule time in regular inservices. Rather, they have developed a resource library of materials and a business database and have made it available to teachers.

The business community has, as a part of the normal recruitment efforts, received orientation and information about STW. Groundhog Job Shadow Day provided another opportunity for business education. Business locations will be the new venue for cadre meetings. According to the director, this will allow both business and educators to be provided with STW ideas and information.

The partnership continues to support STW efforts with the Cocopah, Colorado River, and Quechan Indian Tribes.

Goal 4: Community Involvement
(Including employers and the community-at-large)

Continued recruitment of GSPED business partners has been emphasized throughout the year, according to the director. The identification and contact with community business groups has resulted in the creation of a business directory. Business engagement in work-based experiences for students has been encouraged. Project-specific involvement has been targeted for the coming year. Other community groups that have been targeted include community service clubs and parent organizations.

Goal 5: Public Awareness

For the period July through December 1998, there were 15 presentations and 12 direct mailings as well as seven radio spots, ten television spots and numerous newspaper articles. The partnership estimates that they made 2,515 student contacts, 2,398 teacher contacts, 80 counselor contacts, 645 school administrator contacts, 1,130 business and industry contacts and 2,215 other contacts for a total of 8,983 contacts through either direct mail or presentations. The Cosby television ads have been well received, according to the director. Newspapers have covered student activities extensively. Other efforts have been customized to local audiences.

Goal 6: System Evaluation

The partnership has participated in all state and national data collection efforts. They also maintain a local database of employers and have created customized evaluation strategies to measure their own needs. A technical assistance and needs assessment survey was administered to help target technical assistance efforts.

Discussion

Partnership Assets

The partnership has made strides to promote systems-building and has strong leadership in place. Particularly notable are the improvements in board structure and governance. The partnership has done a good job of including both counties while recognizing the unique needs of each. The public awareness activities are highly developed.

Furthermore, partnership staff have made conscious efforts to build and support linkages that might help promote sustainable activities. The One-Stop Career Center is a collaborative effort of many social service entities. The partnership is able to take advantage of the services given through this venture. Several schools have adopted programs and incorporated STW philosophy into their curriculum. This will insure the elements of STW will continue to be made available to students. Job shadowing is a promising route for business participation that will probably continue beyond the life of the partnership funding. Finally, there is evidence that many of the events sponsored will continue to be offered through existing entities.

Partnership Challenges

The greatest challenge facing the partnership is the need to create a sustainable system. The partnership does not envision that it will be able to maintain itself in current form. Without staff to organize and

publicize meetings and facilitate systems development, the director feels that it will be difficult to maintain the existing level of partnership activity. Technical support and leadership will not be available to schools and, therefore, the development of projects across district and grade levels will be more difficult.

Yuma and La Paz County schools' levels of involvement in implementing STW, as measured by the LOI survey and active school roster, are lower than those for the state as a whole, particularly at the elementary levels. Lower levels of involvement may reflect implementation delays due to difficulties in years one and two, or may reflect regional differences in readiness. Increasing the level of participation within active schools is a goal that will require buy-in from school administrators and local boards. Fully developing, promoting, and replicating the GSPED pilot projects may influence districts who have been hesitant to participate in the past.

Summary and Suggestions

The partnership has done an admirable job of involving key stakeholders and building collaborative relationships. It will be important to continue to emphasize collaboration and to seek out partners who would be able to support STW in the future.

School involvement varies. Encouraging elementary involvement may require engaging more district and school administrators in the planning processes. The cadre may be able to provide support within their schools and facilitate more participation.

The partnership should continue to evaluate and promote promising practices. The GSPED projects should be assessed to determine if there are lessons to be shared with other districts and schools. Strategies which have been successful in the past, such as publicizing successful schools, should continue to be used.

Events, while important, can be labor-intensive and not necessarily relate to the ongoing school curriculum. The partnership should continue to encourage schools to augment events (such as the administration of inventories in the junior high and career fairs at the community college) with follow-up activities and curricular components.

The business directory is a promising tool. The partnership should investigate how the directory could continue to be maintained and made available to both school, parents, students, and the business community.

Agri-nomics STW Partnership

Site Visit: February 19, 1999[1]

Region Served: Maricopa County

FY 1998-99 funding: $203,924
GSPED Cluster: Food, Fiber, and Natural Products

School Profile

The Agri-nomics School To Work (STW) Partnership serves students in three unified school districts—Gilbert, Mesa, and Peoria. A total of 18 schools within these districts are education partners. Partnering schools enrolled more than 24,000 students in grades pre-kindergarten through 12 in 1998/99 (as shown in Table 1.)

Table 1
Total Student Enrollment for the Agri-nomics STW Partnership (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)
Grades Pre-K through 6	7,306
Grades 7 through 8	5,188
Grades 9 through 12	11,537
Ungraded Elementary (K-8)	0
Ungraded Secondary (9-12)	0
TOTAL	24,031

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

Key business partners range from small business owners (*e.g.*, White Tank Palms) to large associations with numerous members; for example, The Arizona Agri-business Council, Arizona Crop Protection Association, and Western Maricopa Coalition (WESTMARC). In addition, the Agri-nomics STW Partnership includes Jobs for Arizona's Graduates (JAG) and Salt River Project among its partners.

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[1] Observations are based upon:

- initial intake and level of involvement information collected in fall of 1998;
- Group interview with the Agri-nomics STW Partnership Director (Diane McCarthy), the partnership evaluator (Linda Williams) and district vocational coordinators (Jim Brown of Peoria, Mark Hamilton of Gilbert, and Tony Maldonado of Mesa) on February 19, 1999;
- Telephone interviews with Diane McCarthy (2/21/99), David Claridge (2/23/99), Tony Maldonado (2/23/99), Lee McElroy (2/24/99), and David Iwanski (2/26/99);
- Clarifying interviews with Mark Hamilton (3/2/99) and Linda Williams (3/26/99); and
- School site visits to Peoria High School (February 10, 1999), Greenfield Junior High School, and Gilbert High School (February 18, 1999).

Goal 1: System Governance and Partnership Development

Partnership Governance and Staff

A 12-member management committee coordinates and plans activities for the partnership, provides fiscal and evaluation oversight, and recruits business partners for the Agri-nomics STW Partnership. To date, the management committee has not met formally as a group, although individual education members have been in communication. The business representative from the Agri-business Council has met approximately three times with district education partners since March 1998.[2]

Each of the three participating school districts has hired or designated individuals to be responsible for STW activities. The Gilbert Agriculture Specialist (.4 FTE) plans, develops, implements and coordinates student internships, job shadowing, Project PALS, and public awareness activities.[3] In addition, he delivers recruitment presentations to inform all Gilbert junior high school students about careers and educational opportunities in agriculture. Mesa has a Food, Fiber, and Natural Products Coordinator (.2 FTE) who recruits and trains teachers about STW, sets up field trips and guest speakers, and develops industry resource lists for district use. Peoria's Workplace and Campus Enterprise Coordinator supervises off campus work-based learning activities and on-campus student-based enterprises (*e.g.*, design and construction of storage structures and landscapes, production of ornamental nursery stock, hydroponics food production, cloning of plant tissue, and golf course management.) Peoria provides stipends to high school faculty to encourage curriculum integration and adaptation. A Jobs Specialist has been hired to integrate the Jobs for Arizona's Graduates program into Peoria High School.

The Partnership Director is the only staff member (.1 FTE) of the Agri-nomics STW Partnership. WESTMARC serves as the partnership's fiscal agent. The partnership also has contracted with a part-time evaluator.

Sustainability

The issue of sustainability has not been formally addressed. The Agri-nomics STW Partnership hopes to continue the partnership by institutionalizing the programmatic elements within the participating districts. Costs would be absorbed either by businesses or the districts themselves. For example, the partnership is seeking partial funding of the Agriculture Specialist's salary by the Gilbert Unified School District, beginning in July 1999. Increased revenues from college dual enrollment might be used to sustain partnership activities within the school districts. The partnership is also exploring how revenue-generation from student-based enterprises could contribute to system support.

Goal 2: Program Coordination and Integration

Program Coordination and Integration

The Agri-nomics STW Partnership is coordinating STW activities with existing educational and/or training programs. All three school districts have strong traditional vocational agriculture programs/Tech Prep linkages. Strong vocational student associations (*i.e.*, FFA) exist in the secondary schools. Furthermore, the Peoria District has established a relationship with Jobs for Arizona's Graduates, a comprehensive program described below.

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[2] Per interview with Mark Hamilton (3/2/99).

[3] Project PALS will be described in the Program Coordination and Implementation section of the site visit.

The integration of the Arizona Department of Education's Career Pathways is varied. Fall "Level of Involvement" data collected by the state suggest that the Mesa and Peoria Districts plan some activities around Career Pathways. Gilbert indicated that no activities are organized around Career Pathways.

School partners have been attempting to strengthen linkages between elementary, middle/junior high, and high schools. "Try Vocational (TV)" Days in Mesa and Peoria Districts have exposed middle/junior high schools to the vocational programs at the high schools they will be attending. Presentations to eighth grade Gilbert students by the District's Agriculture Specialist have focused upon agriculture career options and corresponding high school courses. Mentoring of elementary students by high school agriculture students has created additional linkages in all three districts.

Some connections have been made between the partnership and postsecondary institutions. Articulation agreements exist between the Gilbert Unified District and Mesa Community College to provide dual credit for four agriculture science courses. Peoria High School is working with Phoenix Community College on an intergovernmental agreement (IGA) to provide an AA degree for its golf-course management curriculum. Contacts at other Maricopa Community College campuses are being pursued. Partnership overtures have been made to Arizona State University West, with limited success. Coordination and integration with universities remain one of the more difficult challenges.

Universal Access:
School Participation and Roll-out Strategy

Although no formal roll-out strategy has been established, interviews suggest that the partnership will expand STW agri-nomics activities in existing partnering districts. These districts have a "history" of agriculture-related curricula. Peoria plans to extend a ninth grade career exploration or "Discovery Class" (piloted at Peoria High School through the STW Partnership) to all Peoria district high schools. Other education partners did not indicate specific expansion strategies. Increasing urbanization also hints that other districts may not have the resources (*i.e.*, space) to implement "new" Food, Fiber, and Natural Products curricula.

JAG will likely expand to two additional Peoria High Schools during the next contract period. Other districts working with JAG are considering expanding the program to include sophomores and juniors, as well as the currently targeted seniors.

Original roll-out plans in the Agri-nomics STW Partnership's proposal targeted expansion to 12 additional educational entities by June 30, 1999 (3 elementary schools, 3 middle/junior high schools, 3 high schools, and 3 postsecondary institutions). In fact, the partnership has expanded to six schools. Two additional elementary schools, one middle/junior high school, and three postsecondary institutions have been added to the partnership since September 30, 1998. Some 125 third grade students at Superstition Springs Elementary and 104 additional third grade students at Mesquite Elementary in Gilbert were added to those students initially targeted. Per the Partnership Evaluator, as of May 1999, "The Agri-nomics Partnership will exceed the projected number of students served by over 1,000 students."

Thirteen percent of the public schools in partnering districts were "active" in the Agri-nomics STW partnership (May 1999). "Active" schools are summarized in Table 2 on the following page. Almost 5,000 students participated in agriculture-related STW activities.

Table 2
"Active" School Participation for the Agri-nomics STW Partnership

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active Schools" (FY 1998/99)							
	E/J	M/J	J/S	K-12	Total	School Name	# Students**	E/J	M/J	J/S	K-12	# Total	% Total
						Gilbert JH	500		1				
						Finley Farms EL	30	1					
						Gilbert HS	47			1			
						Greenfield JH	500		1				
						Highland JH	600		1				
						Highland HS	13			1			
						Islands EL	20	1					
						Mesquite EL	204	1					
						Mesquite JH	500		1				
						Mesquite HS	25			1			
						Superstition Springs	150	1					
Gilbert Unified*	4	16	5		25	Gilbert Unified	2,589	4	4	3	0	11	44
						Carson JH			1				
						Emerson EL		1					
						Westwood HS				1			
						Whittier EL		1					
Mesa Unified	54	12	8	8	82	Mesa Unified	600	2	1	1	0	4	5
						Peoria HS	571			1			
						Cheyenne EL	1,000	1					
						Sun Valley EL	147	1					
Peoria Unified	24		6	2	32	Peoria Unified***	1,718	2	0	1	0	3	9
Total Public Schools	82	28	19	10	139	**Total Public Schools**	4,907	8	5	5	0	18	13
Private Schools													
Department of Youth Treatment													
TOTAL SCHOOLS						**TOTAL SCHOOLS**			5	5	0	18	
Number of Students						Number of Students	4,907						

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

** This table reflects unduplicated counts of students served (May 1999). JAG students are included in Peoria District counts. Mesa District final student counts were not available. Students may have participated in multiple STW experiences.

Integration with Other Initiatives

The Agri-nomics STW Partnership has been working with the Maricopa Software STW Partnership to provide computer-based training to Mesa and Peoria teachers. The Maricopa Tourism and Experience STW Partnership has collaborated with the Agri-nomics STW partnership in some areas as well. Agriculture students have spoken to culinary arts classes about using hydroponics to grow herbs.

As was mentioned previously, Peoria District is working closely with JAG. The national career organization has a computerized data management system that is used to provide 12-month follow-up services for students. Furthermore, the database can be used as a resource for district staff development and to track expenditures.

The University of Arizona and the University of Arizona Cooperative Extension have developed courses and presented workshops in collaboration with the partnership. The Agriculture Specialist from Gilbert has made presentations about Project PALs at Central Arizona College Field Day.

Targeted Access for Special Populations

Although the partnership does not have specific plans for including special populations (*e.g.*, out of school youth), students with special characteristics are being served. Special education students are included in STW activities at one of the elementary schools. JAG targets at-risk students.

STW Elementary, Middle, High School, and Postsecondary Initiatives

Each of the three school districts involved has distinct priorities and uses different education models (*e.g.*, a more traditional vocational education focus versus an "academy" model). School districts may also have different programmatic emphases (*e.g.*, animal science versus plant production or crop protection). Within this context, overall partnership goals and objectives were developed, as well as program partner goals and objectives. The following summarizes the Agri-nomic STW Partnership's targeted implementation areas.

Curriculum Integration. One of Peoria District's foci has been to integrate Food, Fiber, and Natural Products into the PAC2E curriculum. Examples of curriculum integration include:

- Eleventh grade English classes produced a school newsletter with articles about horticultural mechanics.
- Block scheduling alignment of academic and vocational classes.
- Two biology and two agriculture classes collaborated on an experiment involving bacteria and mesquite trees. Teachers did pre-tests of student knowledge and perceptions.

Examples of curriculum integration in the Gilbert and Mesa Districts include:

- Integration of "Food, Land & People" (developed by the University of Arizona Cooperative Extension) into K-12 science curriculum (planned, not yet implemented)
- Integration of "Ag in the Classroom" (developed by University of Arizona) into K-12 science curriculum (planned, not yet implemented)
- "Ag boxes," curriculum resource materials for Gilbert elementary and possibly junior high school teachers (developed by Agriculture Specialist).

JAG provides students with classroom and small group instruction to help them master 37 employability competencies.

Career exploration. Peoria has implemented a semester-long ninth grade "Discovery Class" designed to assist students in selecting a career pathway. Some 271 students were served the first semester. As part of the class, students completed career interest inventories and worked on career portfolios.

Field trips. Mesa Unified School District intended to provide field trip opportunities for 24 classes (12 high school classes, 6 junior high classes, and 6 elementary classes.) In all, a targeted 600 students in grades 4-12 would be served. At the time of the site visit, 125 elementary students from three classes had attended a field trip at the Biosphere. The entire Emerson Elementary fifth grade (129 students from 5 classes) had visited the Payson Forest Service. Additional elementary school field trips were planned from March through May. A joint Westwood High School/Carson Junior High field trip of applied biology and agriculture science students was planned for early April. JAG students also participated in "several" field trips, and have two more planned before the end of the school year.

Guest speakers. JAG brought in 24 guest speakers.

Student internship, job shadowing, and supervised occupational experiences opportunities. Gilbert District high school students are participating in supervised occupational experiences coordinated between Tech Prep and STW. Over 100 Westwood High School students in Mesa have had work experiences through cooperative education.[4] Peoria Unified School District provided direct work experience opportunities to 273 high school students. "The Job Specialist (JAG) is working to develop summer internship positions."

Project PALS (Partners in Active Learning Support). Project PALS is a program tested and developed by the FFA. Through the program, high school students work with elementary students on agriculture-related activities (*e.g.*, making bird feeders, carving pumpkins, making cheese, painting flowerpots and planting seeds). As designed, high school students are trained in an initial orientation session, and subsequently travel to the elementary schools on a monthly basis. In Gilbert, 88 students from three high schools and 175 students from 4 elementary schools (grades one, three, four, and a multiage first through fifth grade class) had participated in PALS activities at the time of the site visit.

Mesa has not implemented Project PALS as described above. In lieu of Project PALS, Emerson elementary students traveled to Westwood High school and cycled through agriculture "stations" developed by high school students. Stations included aquaculture, agricultural production, ecosystems, and food processing.

Peoria did not have an objective to implement PALS. However, plans were underway to pair high school students (from PAC2E) with 147 Sun Valley Elementary School students (in seventh grade) to raise ladybugs. At the time of the site visit, this objective had not yet been implemented.

JAG. JAG provides one-on-one counseling, a supportive student organization, community service projects, and 12-month follow-up assistance to students.

Goal 3: Technical Assistance

Ongoing Needs Assessment

Each education partner determines ongoing needs and makes programmatic adjustments.

Curriculum/Assessment Initiatives (Including Career Pathways, *K-12 Workplace Skills*, Applied/contextual curriculum)

Students at Peoria High School enroll in "academies" in the tenth grade, in which they progress through a sequential series of career-related courses. Students continue to catalog their accomplishments in the career portfolio started in the ninth grade Discovery Class. In addition to this "passport," students receive a career-related endorsement on their high school diploma. This serves as a portable skills credential, and is based upon SCANS skills.

The Agriculture Specialist in Gilbert has collected and distributed relevant instructional and resource materials in and about agriculture for elementary school teachers. In addition to these "Ag boxes," crayons and coloring books were obtained from the Arizona Beef Council for use in Project PALS.

One Mesa objective was to compile a list of industry resource people. Names have been collected throughout the year. It is expected that this list will be complete at the end of the school year.

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[4] The Mesa Unified School District originally intended to expose 70 9th grade students to job shadowing, but was unable to complete the objective because of the limited time availability of the District's Food Fiber and Natural Products Coordinator.

Professional Development Initiatives
(Including business and educators)

The Agri-nomics STW Partnership's professional development initiatives consist of a teacher/industry exchange program, a summer agricultural institute for junior high and elementary academic teachers, business internships for high school teachers, and teacher inservices on STW/agri-nomics curriculum integration and portfolio development. Progress in accomplishment of professional development objectives at the time of the site visit was:

- One agriculture teacher from Westwood High School had participated in a teacher/industry exchange. Four opportunities for Mesa teachers were being planned for late May or early June. Specific details for these additional exchanges were not available at the time of the site visit.
- Seven Gilbert District academic high school teachers and ten Mesa elementary school teachers are targeted for the three-day "Ag in the Classroom" institute, to be held in June.
- At the time of the site visit, one Gilbert high school teacher had completed a 40-hour internship. Two additional internships were planned. Five more teachers had been targeted. The original number of teachers that Gilbert hoped to reach was 12.
- A "Food, Land, and People" inservice for 32 elementary, middle/junior high, and high school teachers from Gilbert and Mesa schools was scheduled for April 10, 1999.
- Seven Mesa teachers attended inservices on integrating STW and Agri-nomics into elementary and junior high school curriculum
- Three Gilbert elementary school teachers attended an inservice on curricular integration.
- Twelve academic teachers from the Peoria High School participated in a "Writing across the Curriculum Workshop" aimed at integrating STW and Agri-nomics into the science, math, and language arts curricula.
- Twenty-five Peoria High School teachers attended two workshops on portfolio development for use in substantiating Agri-nomics STW activities.

Goal 4: Community Involvement
(Including employers and the community-at-large)

In September 1998, the Agri-nomics STW Partnership had eight partnership-level business partners. By May 10,1999, they had ten partners (see Table 3). In the original roll-out plan, the partnership had intended to add a total of five more business partners.

Each local education agency has specific community and business partners with whom they interact. For example, Gilbert has solicited support and participation from the United Dairy Association, the Arizona Beef Council, the Arizona Cotton Growers, the Arizona Nursery Association, and the United Pork Producers. The Agricultural Specialist hired by the District has strong community ties. Food, Fiber, and Natural Products representatives participate in a yearly job fair for graduating seniors held at Gilbert High School.

The Agri-nomics partnership intended to use CEO community roundtables to foster additional business participation. However, these quarterly meetings between key executives were primarily forums to discuss key Arizona policy issues, rather than to introduce agri-business and STW to a larger public.[5]

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[5] Per interview with David Iwanski (2/26/99).

Table 3
Active Business/Other Partners for the Agri-nomics of STW Partnership (FY 1998-99)

Partner Name	Size of Business*			Association	Government	CBO	# Total
	0-49	50-499	500+				
Jacque Acommazzo	1						
White Tank Palms	1						
Total 0-49	2						2
Southwest Gas		1					
Valley Industries		1					
Total 50-499		2					2
TOTAL BUSINESS PARTNERS	2	2					4
Arizona Agri-business Council				1			
Arizona Crop Protection Assn.				1			
WESTMARC				1			
TOTAL ASSOCIATIONS				3			3
Maricopa Farm Bureau					1		
Salt River Project					1		
TOTAL GOVERNMENT PARTNERS					2		2
Jobs for Arizona's Graduates						1	
TOTAL COMMUNITY-BASED ORGANIZATIONS						1	1
TOTAL BUSINESS/OTHER PARTNERS	2	2	0	3	2	1	10

* Number of Employees

Goal 5: Public Awareness

The partnership uses a variety of strategies to publicize its STW activities. One-on-one meetings with school administrators (Mesa and Gilbert), parent orientations (Mesa), student workshops (Gilbert), and student "vocational days" (Peoria) have all been used to increase public awareness. Articles in local newspapers (Gilbert and Mesa), district newsletters (Gilbert and Peoria), and school newsletters (Gilbert and Peoria) have also been employed. The Gilbert Agricultural Specialist has tried to raise the level of awareness by making six presentations to State level agri-business organizations. An article written by him about Project PALS was recently accepted into a national publication with a circulation of over 450,000 readers.

Goal 6: System Evaluation

The Agri-nomics STW Partnership participates in the overall state evaluation plan, which incorporates both state and federal reporting responsibilities. In addition, the Partnership Director has contracted with an outside consultant to assure compliance with state evaluation requirements, which include a partnership self-evaluation plan. The evaluator has assisted the partnership in clarifying and modifying goals and objectives, documenting evidence of success, and determining additional relevant data to be collected.

Discussion

Partnership Assets

The Agri-nomics STW Partnership is actively engaged in providing students with integrated school-based, work-based, and connecting STW experiences. PAC2E students apply classroom learning in the operation of student-based enterprises (*e.g.*, a commercial greenhouse and a 3-hole golf course). Peoria High school seniors use what they've learned to design and implement campus improvement projects. Strong FFA chapters in all three districts reinforce school and work-based activities.

The Agri-nomics STW Partnership encourages education and business partners to interact directly, so as to foster and develop relationships. Most schools are working with multiple businesses. To illustrate, Peoria High School has been working with Carsten-Ping, local golf courses, and Sun City West to provide career preparation in golf course management. A businessman from the House of Tile works two hours each day with Peoria students to construct storage sheds for resale.

The partnership has forged new links between schools. Said one high school agriculture teacher at Gilbert, "The value in School To Work is the establishment of connections between junior high and high school. The relationship was not there previously. Tanner (the Agriculture Specialist) got the principals in one room talking. The Agriculture Specialist is the value-added link.." Tanner Young's presentations to eighth grade science classes (approximately 2100 students)[6] on agri-business career options and high school/postsecondary course requirements helped establish linkages between Gilbert junior and senior high schools. Project PALS in Mesa and "try vocational days" are other examples of cross-school connections.

Partnership Challenges

The Partnership Director, business, and school partners listed numerous challenges faced by the Agri-nomics STW Partnership this year. The following is a list of difficulties encountered:

- Scheduling partnership management committee meetings. Because of conflicting schedules, the partnership management committee was unable to meet.
- Communication problems with the state. Some of the individuals interviewed felt that state directives had been confusing and, in some cases, conflicting.
- "Paperwork" problems. The amount of paperwork required by the State was perceived to be onerous. Concern was expressed over the time gap between the time a service was rendered/activity took place and reimbursement.
- Personnel issues. Districts found it difficult to recruit coordinating STW personnel for the amount of money offered. Per the individuals interviewed, the part-time nature of the positions hampered implementation of STW activities (*e.g.*, development of additional job shadowing, internship, and supervised occupational experiences, provision of field trip opportunities, curricular integration, and teacher training). The JAG Jobs Specialist quit after one and one half months. A new Jobs Specialist was not hired until November, delaying implementation of the JAG program.
- Creating a "buy-in" or ownership of School To Work. Support of STW was complicated by several factors. The move towards site-based management at both the district and state level was felt to be at cross-purposes with providing a systemic, seamless pathway for students. In addition, there was a perception that linkages between GSPED clusters had been discouraged rather than encouraged.

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[6] 500 students at Greenfield Junior High School, 500 students at Gilbert Junior High School, 500 students at Mesquite Junior High School, and 600 students at Highland High School.

Finally, local political conditions in Mesa and Gilbert made use of the STW terminology problematic.

- Working within existing education systems. In establishing its academy model, Peoria High School was challenged in creating block scheduling that would allow curricular integration. This challenge was met through the efforts of a creative counselor and supportive administration. In the Gilbert District, a plan to place an aviary at one of the elementary schools as part of Project PALS had to be approved by the school board before it could be instituted.
- Field trips. Mesa indicated that some of the planned field trips did not occur for the following reasons:
  - "It was hard to get hold of teachers after school."
  - The Food, Fiber, and Natural Products Coordinator worked only 1 hour a day.
  - Substitute teachers were difficult to obtain.
  - Peoria met the "field trip challenge" through block scheduling, or "blending" students with another teacher's class.

Summary and Suggestions

The Agri-nomics STW Partnership has experienced difficulties in the area of system governance and partnership development (State Goal 1). The partnership's proposal stated "The Agri-nomics Partnership will establish and operate under the authority of a representative Management Committee. The Management Committee will coordinate all activities and will be responsible for clarification of member roles and responsibilities." Proposed measures of success were to have been membership lists, minutes, reports, IGA's, project implementation summaries, updated member rosters, and a completed expansion plan. To the knowledge of the State evaluator, these have not been accomplished.

While each of the partnering education entities have their own needs and agendas, the "decentralized" nature of the partnership makes planning a challenge. Education partners determine programmatic revisions, but no nuclear governance mechanism exists to ensure the creation of a STW system. Other than periodic evaluation review and feedback to the Partnership Director, the lack of an established governance structure dispenses with either an oversight or technical assistance function. If partners or staff members fail to fulfill their responsibilities, few avenues exist to either "get them back in line" in a timely manner or provide problem-solving assistance. It may be that the lack of a coordinating structure may partially explain why the issue of sustainability has not been formally addressed and why partnership roll-out goals have not been met.

Another potential problem exists in the partnership's lack of a functioning governing body. The Partnership Director also directs WESTMARC, which acts as fiscal agent for the partnership and is considered a business partner. An operational governance structure would help to ensure that other partners would minimize any potential conflicts of interest arising from WESTMARC's involvement.

The second partnership goal, "As it relates to the Food, Fiber, and Natural Products GSPED Cluster, the Agri-nomics Partnership will work through all of its partners to identify, coordinate training/retraining by establishing a continuum of lifetime school-based, work-based, and connecting activities." While students have had school-based, work-based, and connecting opportunities (State Goal 2: Program Coordination and Integration), the State evaluator expressed a concern that business participation appeared to be geographically based. That is, it appears to be unknown how the 'listed' business partners, other than the Agri-business Council and WESTMARC (the fiscal agent) work to create the lifetime opportunities listed above.

On May 10 1999, the State evaluator received a matrix of business partners with whom the Partnership and its individual education/program partners are working. The Arizona Agri-business Council, Arizona Crop Protection Association, and Maricopa Farm Bureau are business partners that work with the Partnership, all three districts, and JAG. Salt River Project and Southwest Gas collaborate with the Partnership, JAG, and the Peoria District. Other business entities partnering with one or more districts and /or JAG are: Arizona Nursery Association, Mountain States Nursery, Paradise Nursery, Arizona Public Services, University of Arizona Extension Services, The United Dairy Council, The Pork Producers Association, The Arizona Beef Council, the U.S. Forest Service, Arizona Game and Fish, and Future Farmers of America.

Education partners have met or will most likely meet the majority of their identified 1998/99 goals and objectives. Personnel have been hired. Students have enrolled and participated in school-based, work-based, and connecting STW activities. Curriculum integration has occurred. Professional development opportunities have been provided. Partnering districts have attempted to provide universal access to students in participating schools, to integrate with other initiatives, and to target special populations (*e.g.*, JAG's emphasis on at-risk youth).

However, individual education partners have been challenged in satisfying some of their proposed goals and objective deadlines. Although Mesa provided numerous field trip opportunities on the elementary school level, some junior high and high school field trips most likely will not take place. Project PALS in was not implemented as envisioned. Proposed job shadowing experiences for the junior high school level were not possible.

JAG program implementation was delayed due to staff turnover in the first semester. However, 34 students did attend daily, 90-minute JAG classes during the second semester. JAG anticipates that it will accomplish its outlined goals and objectives.

The Agri-nomics STW Partnership did not list technical assistance in its partnership goals, but education partners have addressed this state goal (State Goal 3: Technical Assistance). For example, Peoria High School has re-aligned its curriculum and developed a career portfolio for academy students. All three partnering districts have offered teachers numerous professional development opportunities--from internships to inservices. There have been no professional development opportunities offered to business partners.

Partnership goals 4 and 5 address the state goals of community involvement (Goal 4) and public awareness (Goal 5). Again, the efforts in these areas have been initiated and sustained largely by the individual education partners.

The Agri-nomics STW Partnership has complied with state and national evaluation requirements. Its goal of contracting with an independent evaluator for the design, coordination, and implementation of the system and programmatic evaluation of the partnership has been achieved.

Additional suggestions for consideration by the partnership include:

- Provide regular opportunities for input from all partners (business and education). The partnership management committee should attempt to meet on at least a quarterly basis. A yearly calendar of meeting dates might help to resolve scheduling conflicts, as would designating partner representatives to serve in the absence of management team members. E-mail, fax, and telephone conferences could handle interim partnership matters.

- Better documentation of partnership interactions. If this is a decentralized partnership model, then informal meetings between partners should be documented.
- Planning. The Agri-nomics STW Partnership needs to address how the partnership will be expanded to additional school districts/business partners and how the STW system will be sustained when federal funding ends.
- Examination of partner goals and objectives. If accomplishment of certain goals and objectives (*i.e.*, student internships, supervised educational experiences, teacher training, field trips) is unrealistic given current staffing levels, either the staffing or the expectations might be adjusted.
- Continued dialog with the State. Attendance at monthly Maricopa Partnership meetings and one-on-one contacts between the Partnership Director/appropriate state personnel will help to facilitate communication.
- Streamlining of reimbursement process. An analysis of where the reimbursement pipeline is "breaking down" (*i.e.*, school level, fiscal agent level, state level) would be helpful. Providing a mechanism for connecting school district, fiscal agent, and state personnel might also be beneficial.
- Professional development opportunities.
  - The partnership might consider a "kick-off" STW orientation for new school partners, business partners, other individuals not readily buying into the concept of STW. Continued one-on-one dialogues with potential partners and public awareness activities publicizing the message will also help to create "buy-in."
  - If lack of training is a barrier to implementing PALS in the Mesa District, the partnership might consider combining teacher training with the Gilbert District or providing training in a "train the trainer" format.
  - Provide teacher internship opportunities at the beginning of a contract period, so that learning can be integrated into the curriculum during the year.
- If field trips are difficult to arrange, the partnership might consider alternative career awareness and exploration work-based activities (*e.g.*, guest speakers and presentations).
- Familiarize elementary and middle/junior high school personnel with the terms "STW" and GSPED. In the initial Fall "Level of Involvement" state survey, all of the elementary schools and middle/junior high schools said they were not familiar with GSPED industry clusters. Furthermore, they did not see that their STW activities were related to a GSPED cluster.

Arizona Public Service STW Partnership

Site Visit: March 30, 1999[1]

Region Served: Maricopa County

FY 1998-99 funding: $73,135
GSPED Cluster: Environmental Technology

School Profile

The Maricopa Arizona Public Service (APS) School To Work (STW) Partnership serves students in the Pendergast school district and one charter school—Omega Academy. Six schools are represented. The APS STW Partnership includes schools enrolling approximately 6,000 students in grades pre-kindergarten through 12 in 1998-99 (as shown in Table 1.)

Table 1
Total Student Enrollment for the Arizona Public Service STW Partnership (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)
Grades Pre-K through 6	4,439
Grades 7 through 8	1,370
Grades 9 through 12	1,240
Ungraded Elementary (K-8)	0
Ungraded Secondary (9-12)	0
TOTAL	5,933

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

In 1998-99, the Maricopa APS STW Partnership had a single business partner—Arizona Public Service.

Goal 1: System Governance and Partnership Development

Partnership Governance and Staff

A nine-member steering committee meets on a monthly basis to plan, implement, and monitor partnership progress in the accomplishment of its goals. The APS steering committee is comprised of the Partnership Director, site coordinators from five participating Pendergast schools, the Executive Director of Omega Academy, and two communication specialists from APS.

The Deputy County Attorney has approved an Intergovernmental Agreement detailing the fiscal relationship between Pendergast School District and Omega Academy. In addition, school site coordinators receive stipends for planning and implementation of STW activities.

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[1] Observations are based upon:
- Initial intake and level of involvement information collected in fall of 1998;
- Interview on March 30, 1999, with Mary Goitia, Partnership Director;
- School site visits to Desert Mirage, Villa de Paz, and Pendergast Elementary on March 30, 1999.

The Assistant to the Superintendent of Pendergast Elementary School District acts as the Partnership Director for the APS STW Partnership. Pendergast Elementary School District is also the fiscal agent for the partnership.

Sustainability

The Pendergast School District has a curriculum in place (Technology, Life, and Careers, or TLC) that is required of all students in seventh and eighth grades. When federal School To Work monies are no longer available, the TLC curriculum will continue to be supported by the school district. The partnership expects to sustain the partnership through the following means:

- Using income generated by Microsociety student-run businesses to pay for future supplies,
- Institutionalizing APS partnership support (*e.g.*, continuing speaker series, job shadowing, e-mail linkages), and
- Establishing additional partnership linkages (*e.g.*, with Northern Arizona University, Environmental Technology Industry Cluster businesses, and Lockheed Martin).

Goal 2: Program Coordination and Integration

Program Coordination and Integration

With the exception of Omega Academy, STW activities have been focused at the sixth through eighth grade levels. Meetings have been held with Tolleson Union High School to coordinate programs. In the upcoming year, efforts will be made to standardize portfolio requirements to bridge graduation from eighth grade to high school. Arizona State University (ASU) is meeting with district curriculum representatives to explore inclusion of Career Pathways materials into TLC curriculum. Northern Arizona University (NAU) is "working closely with the district in providing professional development through their Arts and Sciences Technology Division of the Center for Excellence."

Universal Access:
School Participation and Roll-out Strategy

A formal roll-out strategy has been established, but no school roll-out was planned for the first year of implementation (1998/99). Tolleson High School, a second Omega Academy site, Acclaim Charter School, Ball Charter School, Copper King Elementary, and Desert Horizon Elementary will join the partnership in year two. Microsociety at Pendergast Elementary will be expanded to other grade levels. By year three, all feeder elementary schools within the Tolleson Union High School District will be included as partners. Fallon Junior High School is one of the possible roll-out schools mentioned. The partnership has also invited WESTSIDE IMPACT (a consortium of west side school districts) to participate in the APS Partnership. All seventh and eighth grade students in partnering Pendergast District schools are receiving TLC classroom instruction.

Sixty-seven percent of the public schools in partnering districts were "active" in the APS STW partnership. "Active" schools are summarized in Table 2. Almost 1,400 students participated in Environmental Technology STW activities as of May 1999.

Table 2
"Active" School Participation for the Arizona Public Service STW Partnership

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active Schools" (FY 1998/99)							
	E/J	M/J	J/S	K-12	Total	School Name	# Students**	E/J	M/J	J/S	K-12	# Total	% Total
						Desert Mirage EL	186	1					
						Garden Lakes EL	316	1					
						Pendergast EL	209	1					
						Villa de Paz EL	243	1					
						Westwind EL	284	1					
Pendergast ESD	8				8	Pendergast ESD	1,238	5				5	63
Charter				1	1	Omega Academy	130				1	1	100
Total Public Schools	8			1	9	**Total Public Schools**	1,368	5			1	6	67
Private Schools													
Department of Youth Treatment													
TOTAL SCHOOLS	8			1	9	**TOTAL SCHOOLS**		5			1	6	67
Number of Students						Number of Students	1,368						

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

** This table reflects unduplicated counts of students served (May 1999). Students may have participated in multiple STW experiences.

Integration with Other Initiatives

The APS STW Partnership has been collaborating with NAU on a Title II teacher quality technical training grant aimed at integrating technology into the classroom. NAU Center for Excellence staff interns have also worked with teachers and students in a "state-of-the-art" classroom. The partnership worked with Junior Achievement on Groundhog Job Shadow Day Activities. The Software STW Partnership is working with the APS STW Partnership in instituting additional professional development opportunities for teachers.

Targeted Access for Special Populations

The partnership does not have specific plans for including special populations (*e.g.*, out-of-school youth). However, Limited English Proficient (LEP) students are paired with English-speaking students and Learning Disabled students with regular education students when working on seventh and eighth grade technology modules. Written presentations, or "buddy assistance" in oral presentations, are used for students with speech impediments. Bilingual aides also work with LEP students to translate modules. Non-traditional careers (*e.g.* APS radiation specialists) are included as part of career exploration activities.

STW Elementary, Middle, High School, and Postsecondary Initiatives

All students in grades six through nine at Omega Academy, all seventh and eighth grade students in partnering Pendergast Elementary School District schools, and sixth grade students from Pendergast Elementary participate in STW activities. The following are examples of STW activities implemented by the APS STW Partnership this year.

Technology, Life, and Careers (TLC) Curriculum Integration. All seventh and eighth grade Pendergast Elementary School District students participate in the TLC curriculum, which is based upon the Arizona Department of Education's "Level I framework" which integrates *Workplace Standards*. Each participating

school has chosen a different way to implement the TLC curriculum and to integrate STW activities within the TLC framework.

Technology modules: 527 students at Villa de Paz and Westwind schools used hands-on activities to explore at least three technology stations or "modules." Students were able to choose from 15 to 22 possible modules. Students rotated through the technology modules, one hour each day for seven weeks. Technology teachers worked closely with science teachers, as guest speaker presentations were made in seventh and eighth grade science classes.

Classroom instruction: 711 Desert Mirage, Garden Lakes, and Pendergast students explored careers through classroom-based instruction. Pendergast TLC students participated in the "Real Game,"™ which is an extended career awareness project for seventh and eighth grade students.

Microsociety Curriculum Integration. At Pendergast Elementary, 112 sixth grade students participated in the formation of a "Microsociety" as did 171 sixth through eighth grade students at Omega Academy. The "Academy" phase (*i.e.*, first semester) focused studies on Economics, Finance, Government, and hiring procedures. In the second semester, students applied what they learned to create and operate a court system, newspaper, and small businesses.

School to Work class. At Omega Academy, 59 ninth grade students were required to complete a career exploration class which included campus peer teaching and cross-age tutoring.

Career portfolios. Seventh and eighth grade students at partnering Pendergast schools compiled portfolios, which included completed technology modules, guest speaker worksheets, occupational interest inventories, resumes, and job applications.

Occupational interest inventories. Occupational interest inventories were completed by all seventh and eighth grade participants on a pre/post basis, and were based upon a list of 30 APS careers. This provided information to the partnership so that speaker series and other activities could be tailored to student interests.

Field trips. Omega Academy students will have completed 18 field trips by May 1999. Desert Mirage students went on a field trip to APS in January 1999. Pendergast sixth grade students also visited the APS Generation Plant.

Job Shadowing. Some 60 eighth grade students (approximately 10 from each partnering school) and 50 APS mentors participated in the Groundhog Job Shadow Day. Students were chosen to participate based upon attendance, behavior records, completion of schoolwork, and submission of applications, resumes, and essays. Individual schools determined the criteria for job shadowing selection.

Eighth grade monthly speaker series. From a list of several hundred possible APS careers, the partnership selected 30 careers that dealt specifically with Environmental Technology. Monthly speakers were drawn from the list and spoke at all six partnering schools. A total of 42 speakers spoke at participating Pendergast district schools.

Career Theme Day. Elementary and middle school Omega Academy students dressed in the garb of their chosen professions.

Career Fair. Some 475 seventh grade Pendergast District students and 50 students in grades 9-12 at Omega Academy students participated in an APS-sponsored career fair at Estrella Mountain Community College in May. Approximately 20 careers were represented.

Computer-based exploration. At Desert Mirage, 186 seventh and eighth grade students used career-related software to research various careers.

Student career exploration reports/presentations. As part of the TLC curriculum, students researched a single career and presented it to the class. In addition to a research report on a Dictionary of Occupations job title, students at Desert Mirage were required to create a Power Point presentation examining educational requirements, occupational skills, job outlook, salary, and related occupations. Students received extra credit for interviewing APS employees as part of their research.

Engineering project. At Garden Lakes Elementary, 135 seventh grade students researched construction and fastening methods using an on-line database, "Bookshelf." Students then constructed towers made of straws and paper clips, testing and analyzing results. 13% of the students received a passing grade on a pre-test. 85% of the students received passing grades at the end of the unit.

Products. At Garden Lakes, 134 eighth grade students were required to create spreadsheets to be used to create charts and tables for their science projects. Desert Mirage students also created databases, spreadsheets, resumes, and thank-you notes. Pendergast students completed job applications and resumes.

Student-based enterprises. Microsociety students created their own small businesses as part of the curriculum. Products were produced in the career exploration modules being used at Villa de Paz and Westwind schools.

"Discovering My Purpose" Conference. Some 150 Omega Academy students in grades 6-12 and their parents participated in a day long conference in November of 1998. The purpose of the conference was to "lay the foundation for the GSPED Environmental Technology cluster and to prepare students for the future by recognizing the value and responsibility they have to themselves, their peers, families and the environment."

Job shadow matching process. Procedures were established to match students' career interests with job shadowing opportunities. Students were required to complete an application and resume, which were used to match students with available mentors. Procedures were also set up to identify employees who were interested in working with students.

Monitoring systems. Forms were developed to evaluate job shadowing and guest presentation experiences.

Miscellaneous. Ten Villa de Paz students took their resumes to APS during Groundhog Job Shadow Day to have them evaluated by their mentors. Villa de Paz is working on a brochure describing the technology modules so that guest speakers can address what students are learning in the classroom. Microsociety students from Pendergast have made presentations in third grade classrooms.

Goal 3: Technical Assistance

Ongoing Needs Assessment

The steering committee assesses partnership needs on an ongoing basis, producing documents (*e.g.* student and/or employer surveys, student worksheets, employer presentation guidelines) as needed. In addition, they review implementation of the STW contract with the State throughout the year.

Curriculum/Assessment Initiatives
(Including Career Pathways, *K-12 Workplace Skills*, Applied/contextual curriculum)

The partnership is incorporating STW activities into existing curriculum and expanding career exploration curriculum elements. Steering committee members have developed career presentation guidelines for presenters and portfolio questions/guidelines for students. STW site coordinators also serve on the Pendergast District Technology Committee, which is working to integrate *Arizona Standards for Technology* and *K-12 Workplace Skills* into the current curriculum. Particular emphasis has been placed upon Standard 5: "Students will demonstrate a set of marketable skills which enhance career options."

Professional Development Initiatives (Including business and educators)

The APS STW Partnership professional development initiatives consist of training workshops and conferences for educators and/or business people. Completed or planned activities are:

- Groundhog Job Shadow Day Orientation for 50 APS business mentors;
- 4-week training session (conducted by Northern Arizona University) for 12 teachers on curriculum integration of Arizona Standards for Technology and *Workplace Skills*;
- Microsociety Conference attended by the site coordinator from Pendergast ;
- NSBA Technology Conference in Nashville attended by 12 teachers;
- National Microsociety conference in El Paso attended by 4 teachers;
- A Pendergast District workshop for teachers (held in April) on how to integrate STW into K-8 classrooms;
- The APS Energy Workshop will take place during the week of June 14. Fifty teachers will receive "extensive information regarding Environmental Technology and its connection to the science curriculum." It is anticipated that teachers from all grade levels will be provided with curriculum materials and resources for classroom use.

Goal 4: Community Involvement
(Including employers and the community-at-large)

Per their proposal, the APS STW Partnership did not expect to roll-out to additional business partners during the 1998-99 fiscal year. The Partnership Director indicated that the single business partner (APS) was active this year in "working with science and technology teachers to plan curriculum linkages that support the state standards and relate to career fields in the Environmental Technology GSPED cluster." According to the Director, APS also provided classroom speakers/presenters, support for a career fair, field trip and job shadow opportunities for students, and personnel to "hook up" the schools to the Internet on "Net Day."

Revlon and Lockheed Martin are expected to become business partners during the next contract period. Lockheed Martin donated computers to Garden Lakes Elementary Schools and has been working on

professional development activities with teachers. Four Environmental Technology Industry Cluster businesses, including a solar water pump business, will join the partnership during 1999-2000. Other community involvement activities include "Project Respect" and "A Day of Purpose." The Arizona Rattlers sponsored "Project Respect" for Pendergast School District students. Held in fall of 1998, "Project Respect" was a kickoff for seventh and eighth grade career exploration activities. Omega Academy held "A Day of Purpose" for middle and high school students. According to the Partnership Director, "Brunswick Bowling Alley, Glendale Community College, ASU West, Circles Music Store, Shamrock Foods, Miss Arizona 1997-1998, Peter Piper Pizza and FIBC Puppet Ministry sponsored this event. The theme of the event was 'How My Purpose Affects My Role as a Father, Mother, Employee, Social Servant and Student.'"

Involvement in STW is promoted through parent participation in family technology nights[2], open house tours of technology classrooms, and parent teacher conferences. Finally, a parent from the Pendergast District who works at APS is coordinating efforts to establish a maintenance program apprenticeship at Estrella Mountain Community College.

Goal 5: Public Awareness

District, school, and APS newsletters are the primary vehicles for publicizing the APS STW Partnership.[3] Small group presentations[4] by the Partnership Director are another public awareness tool used.

Parents are informed of STW activities through family technology nights, open houses, parent teacher conferences, and Pendergast District's Annual Report. Microsociety and Groundhog Job Shadow Day activities have been the subjects of Channels 5, 12, and 15 TV news coverage. The partnership is currently exploring the possibility of mailing STW information with APS monthly bills.

Goal 6: System Evaluation

The APS STW Partnership participates in the overall state evaluation plan, which incorporates both state and federal reporting responsibilities. Early in the contract period, there was State concern over Partnership Director attendance at State evaluation meetings. The APS STW Partnership assured the State that partnership representatives were present at all meetings, although they may not have identified themselves as such. The problem appears to have been corrected.

At the time of the site visit, a partnership and program evaluation plan had not been formulated. Tentative partnership and program goals/objectives and measures of success had been written. The partnership had conducted process evaluation of STW activities (*i.e.*, speakers' series, job shadowing, career fair, etc.) In late April, 1999, an evaluation consultant was contracted to assist in evaluation design, clarification of goals and objectives, and summative report activities.

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[2] 130 parents attended a technology night at Desert Mirage school.

[3] School newsletters reach between 400 to 750 households per school. District newsletters are mailed to approximately 16,000 households.

[4] *e.g.*, to the Pendergast Governing Board; a group of counselors; and the Westwide Impact.

Discussion

Partnership Assets

The APS STW Partnership has made efforts to involve entire grade levels in partnering schools and to take the "all students/universal access" mandate seriously. Almost one-quarter of the total number of students in partnering schools have been served during the first year of implementation. Special student needs have been addressed. The partnership has a clear vision of school roll-out for coming years.

The partnership has emphasized career exploration in the implementation of school-based, work-based, and connecting STW activities. Student ability to use current technologies (*i.e.*, computer software and technology modules) to research and present career information appears to have some value. Teachers from two of the schools suggested that students were able to apply what they had learned in TLC classes.[5] Science fair projects for this year had more elaborate graphs and charts. Computer lab usage increased subsequent to class completion.

Partnership Challenges

The APS STW Partnership has faced several challenges this year. The following is a list of obstacles encountered:

- Working within existing educational systems. The Pendergast Elementary School District determined that students could not access the Internet until a district "firewall" was installed. This deterred the implementation of an e-mail-mentoring program. The Pendergast District School Board was expected to approve draft Internet policies in April.

  In addition, the District is perceived as "very site-based." This challenge was addressed by giving schools the option to determine what STW elements would best fit into their existing curricular structure.

- Business partner scheduling and communications. From March to May of 1999, Palo Verde Nuclear Plant had a facility "blackout," which challenged the scheduling of field trips and guest speakers.

  Garden Lakes' staff stated that, "Due to the amount of time involved APS was unable to provide a mentor for the students." The problem with mentors was addressed by having teachers act as mentors to students.

  Omega Academy personnel said, [We] made several attempts to contact APS without response. To honor the Grant requirements, we scheduled tours of the Palo Verde Plant." In response to the first site visit draft, the Partnership felt that Omega might not have been diligent enough in pursuing connections with APS.

- District staff turnover. The fiscal agent (Pendergast Elementary School District) lost its business manager early in the contract period. The Superintendent acted in place of the business manager to handle all fiscal agent responsibilities until the business manager could be replaced. A replacement was hired in January 1999.

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[5] Figures to substantiate claims are unavailable.

- Staffing. "Due to the size of the partnership, there is no Director position that is paid solely to implement the contract. As the contract was being initiated, the steering committee felt that the money should go directly to the classroom to benefit students as much as possible. Instead, the Assistant to the Superintendent coordinates implementation activities. However, this position is responsible for many other district activities."

- Coordinating STW efforts with other districts (i.e., charter school). Initially, the partnership had experienced difficulties with Omega Academy not submitting deliverables and attending steering committee meetings. At the time of the March site visit, the Partnership Director indicated that these difficulties appeared to be resolved.

- Evaluation. Per the Partnership Director, "The major challenge is system evaluation."

Summary and Suggestions

The APS STW Partnership has made some progress in the accomplishment of State goals and objectives. The partnership has an established governance structure. However, it is not comprised of 50% GSPED industry business(es). The partnership has only one business partner. Roll-out goals have been met, because there was not an intent to "roll-out" to additional partners this year. The steering committee has very informally addressed the issue of sustainability.

The emphasis on career awareness and exploration STW activities has meant that efforts to coordinate with existing educational or training programs have been minimal. Career Pathways have not been emphasized. Northern Arizona University and Estrella Mountain Community College have worked with the partnership on a single project basis.

The partnership has established a school and business partner roll-out strategy for ensuing years. Integration with other initiatives has been limited. Non-traditional careers have been included as part of career exploration activities. Efforts have been made to accommodate students with language and physical challenges.

The APS STW Partnership originally targeted serving 1,420 students. It has come very close to meeting this goal, actually serving 1,368 students. Students have participated in school-based, work-based, and connecting STW activities. Educators from partnering schools have participated in professional development activities and have been working to integrate Arizona Standards for Technology and *Workplace Skills* into current curriculum.

Efforts have been made to involve parents and the "larger community" of non-Environmental Technology businesses through special events (*e.g.*, "Project Respect" and "A Day of Purpose"), family technology nights, classroom open houses, and parent-teacher conferences. Newsletters and small group presentations have been the primary means of publicizing the partnership. The partnership has complied with State and National evaluation requirements and conducted process evaluation of STW activities. A formal evaluation plan had not been completed at the time of the site visit.

Because the partnership goals and objectives outlined by the APS STW Partnership are somewhat vague, it is unclear if they have been accomplished. For example, Objective 1.1. "Provide opportunities for students to establish relationships with Environmental Technology professionals in the workplace," might be interpreted as the provision of work-based experiences (*e.g.*, guest speakers, job shadowing, and field trips) for students. It could also be understood as establishment of a mentoring program for students. Most of the objectives, as written, were not well defined or measurable.

Individual school partners have been challenged in meeting some of their objectives. Students from Pendergast Elementary have had limited opportunities to conduct computer research on careers (Objective 1), due to inadequate numbers of computers. E-mail mentoring programs were delayed by district policies.[6] When the State evaluator conducted the site visit, no Environmental Technology professionals had been brought into Microsociety classrooms[7] or field trips conducted.

When the State evaluator expressed a perceived lack of connection between implementation of Microsociety and Environmental Technology, school site coordinators indicated that curriculum integration was designed to follow logical curriculum units. Four classes went on a field trip to Palo Verde Nuclear Plant in late April/early May, following a unit on electricity. The same students went on a field trip to Red Rock State Park to examine water quality and water systems, as part of their science curriculum. Students did have access (albeit limited) to an environmentally-relevant computer program. As part of their entrepreneurial experiences, students were exposed to renewable/non-renewable resources. They were also asked to look at environmental and toxicity factors of the products they developed (*e.g.*, a silly putty product had borax in it and required a warning label). Subsequent to the March 30 site visit, the State evaluator received two e-mails regarding eight potential guest speakers from APS by the end of May 1999.

Desert Mirage, Garden Lakes, Villa de Paz, and Westwind were challenged in Objective 1.3 "Link students and APS mentor professionals to research the uses of database programs in technology and to create a grading database in collaboration with mentors." APS professionals were "mentors" in the sense that they made connections with students through job shadowing and guest speaker presentations. One of the schools (Garden Lakes) chose to substitute an engineering project for the database-grading project. Teachers acted as substitute mentors, in lieu of professional employee/student links.

The original site draft stated that it was unknown whether Omega Academy provided students "with opportunities to explore career interests on the Internet, specifically highlighting careers in Environmental Technology, and arrange for students to correspond with individuals in their career interests 3-4 times throughout the year" (Objective 1.1). Per further clarification from Omega, "Their exploration of career interests was met by another activity, which was their 'Day of Purpose." Relationships with Environmental Technology personnel were limited to guest speakers, field trips, and job shadowing.

Additional suggestions for consideration by the partnership include:

- Recruit and incorporate other Environmental Technology industry cluster businesses into the partnership.
- Expand the steering committee to include additional Environmental Technology business partners.
- Use non-APS business partners during times of scheduling difficulty (*i.e.*, "blackout periods").
- Partnership and partner goals and objectives need to be clarified. Among the recommendations are:
  - Re-examine goals and objectives in light of what are accomplishable, given current staffing and equipment levels.
  - Use the expertise of the hired evaluation consultant to help to rewrite concrete, measurable, and observable goals and objectives.

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[6] Desert Mirage, Garden lakes, Villa de Paz, and Westwind were also challenged in the establishment of e-mail exchanges with technology professionals.

[7] AAA consulting did make a presentation during the fall semester of 1998.

- The APS STW Partnership should address partnership sustainment in a more formal manner.
- Roles and responsibilities of the Partnership Director should be defined. This would allow for delegation of responsibilities to other steering committee members, should the Partnership Director experience competing job responsibilities.
- The partnership should strengthen efforts to integrate Environmental Technology career awareness and exploration more systematically into the curriculum.
- For Omega Academy, field trips should make a logical connection to Environmental Technology careers.[8]
- The expertise of APS and other new business partners should be utilized to help integrate Environmental Technology career awareness into the Microsociety curriculum. For example, businesses might work with Microsociety students to create "green" businesses (*e.g.*, a recycled card company).
- Develop a business partner resource list that indicates what work-based experiences (*i.e.*, guest speakers, field trips, job shadowing) each business partner is willing to contribute.
- The APS STW Partnership needs to strengthen the career preparation aspects of the partnership. Inclusion of the Tolleson High School District into the partnership should help to extend the vision of STW within the partnership.
- STW training should be given to personnel from the three schools who said they were not familiar with GSPED industry clusters and to the school that was unaware of its association with a STW partnership (as indicated in the State's fall "Level of Involvement" survey).
- APS, as a large organization with multiple resources, might be enlisted to help the partnership in recruitment, community involvement, and public awareness activities.
- The partnership must design and implement an evaluation plan.

[8] Some of the Omega field trips appeared to have value in general career exploration, but little relevancy in the examination of Environmental Technology-related careers (*e.g.*, field trips related to sports careers and broadcasting)

Arts and Humanities STW Partnership

Site Visit: February 16, 1999[1]

Region Served: Maricopa County

FY 1998-99 funding: $169,600
GSPED Foundation: Arts and Humanities

School Profile

The Maricopa Arts and Humanities School To Work (STW) Partnership serves students in eight districts (one elementary, three high school, and four unified). A charter high school also is an education partner. The Arts and Humanities STW Partnership includes schools enrolling more than 34,000 students in grades pre-kindergarten through 12 in 1998-99 (as shown in Table 1.)

Table 1*
Total Student Enrollment for the Arts and Humanities STW Partnership (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)**
Grades Pre-K through 6	8,209
Grades 7 through 8	3,681
Grades 9 through 12	22,245
Ungraded Elementary (K-8)	63
Ungraded Secondary (9-12)	13
TOTAL	34,211

* Figures do not include Victory High School
** Enrollment data reflect 27 schools for which data were available of the 28 schools identified in this partnership.

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

The 18 original business partners are members of the Arts and Science in Education Network (ASEN), a network of organizations which provides arts-related outreach experiences to students. In addition, the partnership works closely with the Arizona Commission on the Arts and Arizona State University. Since September 1998, the partnership has added 52 new business partners, including 28 individual commercial artists.

[1] Observations are based upon:
- initial intake and level of involvement information collected in fall of 1998;
- an interview with the Arts and Humanities STW Partnership director on February 16, 1999;
- school site visits to Highland Elementary (February 8, 1999) and Las Sendas Elementary (February 16, 1999); and
- interviews with business partners at an ASEN meeting (February 22, 1999)

Goal 1: System Governance and Partnership Development

Partnership Governance and Staff

The Maricopa Arts and Humanities STW Partnership governance structure consists of a management team of five business and four school district partners, plus the Partnership Director. The team meets quarterly to discuss partnership progress. As of the date of the site visit, two meetings (an orientation and an Arts in Education Conference) had been held. In addition, ASEN business partners meet monthly to provide input and recommendations for system improvement.

Each of the participating 26 schools has a site coordinator.[2] School site coordinators serve as the single point-of-contact between the schools and the STW partnership. As such, they are responsible for determining how to integrate arts and humanities career awareness, exploration, and preparation into school curricula. Site coordinators meet quarterly to network and share information.

The Partnership Director is the only staff member. The Arizona Commission on the Arts provides in-kind clerical support and serves as the fiscal agent for the partnership.

Sustainability

The partnership has developed a website with an "Activities Menu" of arts and humanities business activities available to schools. Continuation of the website beyond the federal funding period will provide continued linkages between schools, businesses, and the larger community. In addition, the partnership is exploring other avenues of system sustainability such as:

- Income generation through student art works or performances;
- Corporate or foundation sponsorship;
- Grants from other sources (*e.g.*, the National Endowment for the Arts); and
- Inclusion of the partnership within the Arts Education program of the Arizona Commission on the Arts.

Goal 2: Program Coordination and Integration

Program Coordination and Integration

The Arts and Humanities STW Partnership is working to tie website activities to the Arizona Department of Education's *Arts Standards*. An April 16 meeting of the Arizona Alliance for Arts Education included the Deans of the Fine Arts Colleges and the Colleges of Education of three state universities. Attention was given to incorporating STW and the Arizona *Arts Standards* into arts educator training. The partnership is exploring additional connections with the Maricopa County Community Colleges and Arizona State University.

Preliminary "Level of Involvement" information collected in the fall of 1998 reveal that two out of the four partnering middle/junior high schools have organized some activities around Career Pathways. Eleven of the 12 participating high schools organize some activities around Career Pathways.

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[2] Three of the schools have two coordinators who are splitting stipends.

Universal Access:
School Participation and Roll-out Strategy

An informal decision-making process will be used by partnership staff to determine how to expand the partnership. The foremost criteria in "rolling out" will be to maximize the number of students served. The participation level of current education partners will also be examined. Other possible criteria to be taken into account are:

- Is the school in the same district as schools that are already partners?
- Does the "new" partnering school already have an arts curriculum emphasis? Would it be "easy" to incorporate STW elements into the curriculum?
- Geographic location—Are the schools located in parts of the Valley (*i.e.*, West side) that are not currently covered by the partnership? The partnership has indicated that it will recruit education partners in geographic proximity to under-utilized business partners.
- Demographics—Are there schools in "at-risk" or lower socioeconomic areas that might be served through the partnership?
- Special populations—Are there schools emphasizing students with special needs?
- Education level—Are the "new" schools filling a gap in providing seamless elementary, middle/junior high, and high school services, and an emerging smooth transition with community colleges?

It is anticipated that the partnership will have a formal roll-out strategy in place by June of 1999.

The Arts and Humanities STW Partnership had originally planned to roll-out to two additional high schools by June 1999. From September 30, 1999 to May 1999, one high school and one elementary school were added to the partnership. Eighteen additional schools/districts have exhibited an interest in becoming part of the STW system during the next fiscal cycle (1999-2000).

Eighteen percent of the public schools in partnering districts were "active" in the Arts and Humanities STW partnership as of May 1999. "Active" schools are summarized in Table 2. Students participated in 17,000 arts and humanities STW experiences.

Integration with Other Initiatives

The Arts and Humanities STW Partnership works closely with several Arizona Commission on the Arts projects, including Arts in Education. In addition, the Maricopa Software STW Partnership is partnering with the Arts and Humanities STW Partnership to explore the use of software in the arts (*e.g.*, in lighting boards, graphic design/animation programming, and box-office ticketing). The Maricopa Tourism and Experience STW Partnership is collaborating with the Arts and Humanities STW Partnership to provide information on arts exhibits/performances and to place local artists in hospitality venues.

Business partners indicated that arts-related unions are not very strong in Arizona, a right-to-work state. Union linkages/opportunities for students are not considered feasible, although a theater union has recently joined the partnership.

Targeted Access for Special Populations

Although the partnership does not have specific plans for including special populations (*e.g.*, out-of-school youth), students with special characteristics are being served. Guest speakers make adaptations for hearing-impaired students at some of the schools. Other schools include autistic or special education

students in STW activities. The partnership also may work with the Arizona Commission on the Arts Anti-Drug A.P.P.L.E. Corps, an after-school artist-in-residence program for at-risk youth.

Table 2
"Active" School Participation for the Arts and Humanities STW Partnership

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active Schools" (FY 1998/99)							
	E/J	M/J	J/S	K-12	Total	School Name	# Students**	E/J	M/J	J/S	K-12	# Total	% Total
						Black Mountain EL		1					
						Cactus Shadows HS				1			
						Desert Arroyo MS			1				
						Desert Sun El		1					
Cave Creek Unified	2	1	1		4	Cave Creek Unified		2	1	1		4	100
						Greenway HS				1			
						Independence HS				1			
						Thunderbird HS				1			
Glendale UHSD			11	1	12	Glendale Unified				3		3	25
						Laveen EL		1					
						MC Cash EL		1					
						Vista del Sur MS			1				
Laveen ESD	2	1			3	Laveen ESD		2	1			3	100
						Brimhall JH			1				
						Hendrix JH			1				
						Highland EL		1					
						Las Sendas EL		1					
						Red Mountain HS				1			
						Westwood HS				1			
Mesa Unified	54	12	8	8	82	Mesa Unified		2	2	2		6	7
						Garcia EL		1					
						Kuban EL		1					
Murphy ESD	4				4	Murphy ESD		2				2	50
						Apache EL		1					
						Cactus HS				1			
						Oasis Elementary		1					
						Centennial HS				1			
						Sun Valley EL		1					
Peoria Unified	24		6	2	32	Peoria Unified		3		2		5	16
						South Mountain HS				1			
Phoenix UHSD			13	1	14	Phoenix UHSD				1		1	7
						Corona del Sol HS				1			
						McClintock HS				1			
						Mountain Point				1			
Tempe UHSD			8		8	Tempe UHSD				3		3	38
Charter				1	1	Victory HS				1		1	100
Total Public Schools	86	14	47	13	160	Total Public Schools	17,000	11	4	13	0	28	18
Private Schools													
Department of Youth Treatment													
TOTAL SCHOOLS	86	14	47	13	160	TOTAL SCHOOLS		11	4	13	0	28	18
Number of Students**						Number of Students**	17,000						

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

** This number represents the number of students STW experiences.

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STW Elementary, Middle, High School, and Postsecondary Initiatives

The Arts and Humanities STW Partnership "Activities Menu" (see sustainability above) is the basis for integration of arts and humanities career awareness, exploration, and preparation into current K-12 curriculum. From either the website or a hard copy list, teacher coordinators from each school select menu items that most closely align with school curricular objectives.

The "Activities Menu" is a starting place. Schools are encouraged to work directly with business partners and/or to seek out new business partners in order to create programs in response to the school and students' unique needs.

Activity costs are indicated on the menu. Nineteen of the activities offered are free. In the current contractual period (1998-99), the partnership has allowed each school $3,500 to spend on activity selection. Examination of the original "Activities Menu" reveals the following:

- The 18 original business partners offer from two to 14 activity options each.
- A total of 119 separate activities are offered for students—58 activities (or 49%) of the activities target high school or middle school/high school students, while 31% (or 38 activities) are appropriate for all age groups. The remaining activities (19%) focus upon elementary and middle school students.
- Most of the businesses (14 out of the 18) offer some activities for each educational level (elementary, middle, high school, all). Three of the 18 concentrate on activities geared towards the middle or high school level. One focuses primarily on elementary level activities.
- Thirty-six percent of the activities are school-based. Forty-seven percent are work-based. The remaining activities are connecting activities.[3]

The Arts and Humanities STW Partnership encourages education and business partners to interact directly so as to foster and develop relationships. Most schools are working with multiple business partners on multiple grade levels. At the time of the February site visit, two of the schools had partnered with six separate businesses. Some business partners work with a single grade level or one to two classrooms in a school. In addition, the Partnership Director acts as a liaison between the partners and provides technical assistance when needed.

Schools represent a range in their abilities to successfully implement STW activities. Schools which already have an integrated arts curriculum are farther along in implementation than either new schools or schools without arts backgrounds. To some extent, the Partnership Director attributed successful implementation to the knowledge and enthusiasm of each school's site coordinator.

School-based elements include curriculum resource materials, student journals, videos, set/costume design, and scale models. Work-based elements include classroom workshops and in-school presentations by arts/humanities professionals, student participation in performance/exhibition activities, job shadowing, and school-based enterprises (student-run art galleries, video documentary crew, and publishing companies). The site coordinators and website help to link the schools with business partners.

[3] The list includes activities for teachers and the community also.

Goal 3: Technical Assistance

Ongoing Needs Assessment

The Arts and Humanities STW Pa tnership is able to update Website activities directly from the Partnership Director's computer. Revisions are based upon input received from teachers and business partners. The partnership also plans to include student and teacher activity-related comments on the website. Additional needs assessment is provided through monthly ASEN meetings and quarterly management team and site coordinator meetings.

Curriculum/Assessment Initiatives (Including Career Pathways, *K-12 Workplace Skills*, Applied/contextual curriculum)

The partnership is investigating ways to incorporate Arizona *Arts Standards* and curriculum integration strategies into its web site.

Professional Development Initiatives (Including business and educators)

Twenty-six teachers, two school administrators, and 20 business partners attended an Arts and Humanities STW Partnership orientation meeting (September), an Arts in Education Conference (January) and the Southwest Arts Conference (March). Two web-site training sessions for site coordinators also have been held. In addition, the website Activities Menu offers 21 opportunities for teachers.

Goal 4: Community Involvement
(Including employers and the community-at-large)

Fifteen business/other partners were targeted for roll-out as of June 3, 1999. By September 30, 1998, the partnership had 21 business/other partners. Currently, 75 business and other partners are participating in the partnership (Table 3, May 1999).

The Arts and Humanities STW Partnership website serves not only to inform the public, but to recruit new school and business partners. In addition, education partners are encouraged to seek out individual artists, commercial art enterprises, and non-partner ASEN members to participate in the partnership. Direct mailings have prompted information requests from throughout the State. The partnership is exploring ways to document community, parent, and non-ASEN member participation.

Goal 5: Public Awareness

The partnership uses a variety of strategies to publicize its STW activities. A primary tactic has been to include descriptions of the partnership and its activities in Arizona Commission on the Arts publications (*e.g.*, "Guide to Grants," "Word of Mouth," "Arizona Commissions on the Arts Bulletin"). Direct mailings of these monthly, quarterly, and annual publications have allowed the Partnership to reach audiences of more than 16,800 persons per mailing. A newspaper article in the "Peoria Times" reached 6,100 people. In addition, brochures about arts-related conferences (see Technical Assistance) have been mailed to almost 3,000 individuals or businesses. Approximately 500 teachers and administrators, arts professionals, community members and arts volunteers have been targeted through conference presentations. The Partnership Directoralso has given presentations to the Arizona Commission on the Arts Commissioners and the Arizona Alliance for Arts Education.

Future public awareness plans might include citywide monthly mailings through the Phoenix Arts Commission, "curtain speeches" about STW before special events/performances, and program/playbill inserts.

Table 3
Active Business/Other Partners for the Arts and Humanities STW Partnership (FY 1998-99)

	Size of Business*							
Partner Name	0-49	50-499	500+	Associations	PS Education	Government	Unions	# Total
Actors Theater, Phoenix	1							
Rebecca Akins (costume designer)	1							
Curt Anthon (dancer)	1							
Arizona Historical Society	1							
Arizona Museum for Youth	1							
Arizona Opera	1							
Arizona Theater Co	1							
Art Institute of Phoenix	1							
ASU Art Museum	1							
ASU Public Events	1							
Ballet Arizona	1							
Joe Bethancourt (singer)	1							
Cam-el Editing	1							
Center for Creative Photography	1							
Childsplay	1							
James Dean (visual artist)	1							
Dan Doyle (storyteller)	1							
Bill Engelsmann (conductor)	1							
Floyd Etsitty (musician)	1							
Jamie Gosney (dancer)	1							
Summer Grant (dancer)	1							
Great Arizona Puppet Theater	1							
Suzi Guarino (dancer)	1							
Dr. Warren Hatfield (band clinician)	1							
Tom Herbert	1							
IMAX Theater	1							
Kerrick James (travel photographer)	1							
Becca Kovach (dancer)	1							
Jonathan Lindsey (dancer)	1							
Joy Loyd (music educator)	1							
Brenda Lunsford (mural artist)	1							
Don Maio (percussionist)	1							
Mars Art Space	1							
Jim Marshall (photographer)	1							
Steve Meier (saxophonist)	1							
Andrea Moser-Salis (dancer)	1							
Christa Moser (visual artist)	1							
Movement Source Dance Company	1							
Steve Murdoch (potter)	1							
Opera-tunity	1							
Phoenix Arts Commission	1							

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Table 3 continued	Size of Business*							
Partner Name	0-49	50-499	500+	Associations	PS Education	Government	Unions	# Total
Phoenix Boys' Choir	1							
Phoenix Museum of History	1							
Phoenix Theater's Cookie Co.	1							
Photomark Industrial	1							
Dan Pinson Jazz'tet	1							
Playwright's Theater	1							
Don Robinson (musician)	1							
Scottsdale Center for the Arts	1							
Scottsdale Museum of Contemporary Art	1							
Southwest Arts in Action	1							
Dean Tarasaki (illustrator/author)	1							
Tempe Historical Museum	1							
Theatreworks	1							
Marsha Tinker (Crime Scene Photographer)	1							
Greg Wenz (visual artist)	1							
West Valley Art Museum	1							
West Valley Fine Arts Council	1							
Brian Wilson (jazz musician)	1							
Dr. Zielke (conductor)	1							
TOTAL 0-49	60							60
Arizona Highways		1						
Arizona Republic		1						
America West Arena		1						
Arizona Renaissance Festival		1						
Channel 3		1						
HAWS Flower Shops		1						
Meadowlark (musical group)		1						
Phoenix Symphony		1						
Ryan Ingram (dancer)		1						
Sky Harbor Airport- Lennee Eller (curator)		1						
TOTAL 50-499		10						10
TOTAL BUSINESS PARTNERS	60	10						70
Arts & Sciences Education Network				1				
Arizona Commission on the Arts				1				
TOTAL ASSOCIATIONS				2				2
Arizona State University					1			
TOTAL POSTSECONDARY EDUCATION					1			1
Federal Bureau of Investigation						1		
TOTAL GOVERNMENT						1		1
SAG/AFTRA (theatrical unions)							1	
TOTAL UNIONS							1	1
TOTAL BUSINESS/OTHER PARTNERS	60	10	0	2	1	1	1	75

* Number of Employees

Goal 6: System Evaluation

The Arts and Humanities STW Partnership participates in the overall state evaluation plan, which incorporates both State and National reporting responsibilities. In addition, the Partnership Director has

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contracted with an outside consultant to provide training on management by objectives and to assist in evaluation design and summative report activities. Other evaluation activities include ongoing evaluation and programmatic adjustment by the partnership management team, ASEN members, and school site coordinators. Written evaluations by site coordinators, monthly activity invoices, and surveys of students, teachers, and business partners are strategies that may be used in the self-evaluation process. The "success" of the website may be measured using e-mail requests/input and by counting the number of "hits" or persons using the site.

Discussion

Partnership Assets

By May of 1999, 17,000 students had participated in arts-related STW activities. Twenty-six of the 28 schools either had conducted or had planned STW activities. The Arts and Humanities STW Partnership anticipated that 96% of the targeted schools would be participating by the end of June 1999.

The Arts and Humanities STW Partnership is actively engaged in providing students with integrated school-based, work-based, and connecting STW experiences. For example, Highland Elementary School in Mesa turned the school into a "museum for a day" and enhanced sixth grade Egyptian curriculum with a mural painting project including on-site assistance from a professional mural artist. Another example of integrated STW activities was a one-day technical production problem solving/job shadowing experience offered by ASU Public Events.

Not only are education partners active, but business partners have been energetically pursued and enlisted. In September of 1998, the Arts and Humanities STW Partnership consisted of 18 business partners. As of March 1999, 52 additional business partners had been recruited.

Partnership Challenges

The Partnership Director, business and school partners listed numerous challenges faced by the Arts and Humanities STW Partnership this year. In almost all instances, efforts have been made to overcome the barriers encountered. The following is a list of the identified challenges, and partnership-proposed solutions:

- Coordinating STW activities with the Arizona Arts Standards. The Partnership addressed this issue by participating in Arizona Alliance for Arts Education forum and by looking at strategies to tie the Arizona Arts Standards into the website and printed "Activities Menu."
- Lack of arts educators in the schools, teacher training in arts education and coordination of STW activities across high school and into postsecondary education. The Partnership has established a relationship with Maricopa Community College District and Arizona State University to work on these issues.
- Reimbursement problems. The Partnership experienced a "gap" between the time an activity occurred and payment of a business/school partner. One proposed solution in addressing this issue was to create a site coordinator "checklist" to help schools deal with the process of setting up activities and paying for them. The partnership also plans to include school and Arizona Commission on the Arts financial officers in its initial orientation meeting next year, so that the invoicing process can be streamlined.
- Logistical problems (e.g., the school phone numbers kept changing). The Partnership Director developed a list of school contacts, which was updated as the school numbers changed.

- Creating "buy-in" or "ownership" of STW in the arts. Possible solutions include offering more teacher/administrator development activities related to STW in the Arts in future years.
- Teacher website training. Training on the website was modified to meet the interest and needs of participating school site coordinators. As many teachers were already "Internet-literate," the training session focused on web site design and arts education websites in general. Because of limited teacher time availability, the training session was added to the quarterly site coordinator meeting.
- Turnover in arts organizations education personnel. The website and hard copy list of activity offerings enabled new business partner employees to "come up to speed" fairly quickly.
- Website/activities menu. The Partnership initially had technical problems with its website and server. These glitches have since been ironed out. The website is being revised to reflect commercial artists, and to allow for additions and updating of information. ASEN business partners are planning to review the "Activities Menu" in the summer of 1999, with regard to examining the description/types of activities the business partner is offering versus actual utilization by education partners.
- Field trips. Transportation costs and the lack of proximity between schools and arts businesses has been a deterrent to field trips. In addition, substitute teachers have not been available to cover classes or substitutes have been pulled from arts classes to cover general education classes. The Partnership has met the "field trip challenge" by offering more work-based experiences (*e.g.*, performances, and guest presentations) at school sites.
- Student internships. Providing students with extended internship experiences has been a challenge. Given the emphasis upon reaching the maximum number of students, the partnership has not concentrated upon internships that reach a limited number of students. Liability issues, transportation, the labor-intensive nature of internships, and student unreliability were all cited as barriers to providing internship experiences. One possible solution to the student responsibility concern might be contracts between business partners and students. Schools wishing to place student interns might also benefit from copies of arts' partners calendars or "seasons." Also, business partners are discussing a special "internship opportunities" flier to be mailed out at the beginning of next school year and to be available at the beginning of the year student/parent orientations at partner schools.

Summary and Suggestions

In summary, the Arts and Humanities STW Partnership has either achieved or made significant progress on most of the goals and objectives identified for 1998-99. The partnership includes members representing the Arts and Humanities GSPED foundation businesses. Partnership governance structure is well established, with regular opportunities for feedback and programmatic revision. The issue of sustainability has been formally addressed. STW system expansion has been examined and first year roll-out goals exceeded. Attempts have been made to integrate arts and humanities activities with other initiatives or partnerships. Special populations have been included in STW activities. Some 17,000 of the originally-targeted 25,000 student experiences had been provided to students as of May 1999. The partnership has endeavored to provide universal access and to reach the maximum number of students. The Arts and Humanities STW Partnership has attempted to engage the larger community, has made public awareness efforts, and has participated in state, national, and self-evaluation efforts.

Additional suggestions for consideration by the partnership include:

- Examine the use of "other" arts professionals (*e.g.*, arts education interns, retirees, and winter visitors) in contributing to the Partnership.

- Identify the barriers to schools/business partnerships. Why are schools partnering with certain business partners and not others? Is it a function of familiarity/reputation, type of activity, or proximity? Potential solutions might include:
  - A "briefing" or "orientation" about the business partners for education partners.
  - Examining the use of incentives for schools to partner with unpaired business partners.
  - Continue to pursue non-ASEN business partners and approach ASEN members not currently part of the partnership.
- Provide additional professional development activities, which might include:
  - Training of site coordinators to offer STW inservices for teachers.
  - More intensive orientation or training for new business partners, administrators, first year school sites, or schools with a less historical basis of partnering with the arts and humanities.
  - Pooling resources with other Maricopa STW partnerships to provide general STW orientation training.
- Recruit additional middle/junior high schools to participate in the partnership (e.g., only four out of the 26 schools are middle/junior high schools).
- Familiarize elementary and middle/junior high school personnel with the terms "STW" and GSPED. In the initial fall "Level of Involvement" state survey, all of the elementary schools and middle/junior high schools said they were not familiar with GSPED industry clusters or that their activities were not related to GSPED clusters.

Bioindustry STW Partnership

Site Visit: April 9, 1999[1]

Region Served: Maricopa County

FY 1998-99 funding: $293,027
GSPED Cluster: Bioindustry

School Profile

The Maricopa Bioindustry School To Work (STW) Partnership serves students in two unified districts and one elementary school district. A total of four schools are education partners. The Bioindustry STW Partnership includes schools enrolling almost 5,000 students in grades pre-kindergarten through 12 in 1998-99 (as shown in Table 1.)

Table 1
Total Student Enrollment for the Bioindustry STW Partnership (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)
Grades Pre-K through 6	1,886
Grades 7 through 8	670
Grades 9 through 12	2,200
Ungraded Elementary (K-8)	5
Ungraded Secondary (9-12)	0
TOTAL	4,761

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

The Maricopa Bioindustry STW Partnership has 21 business/other partners, including 11 small businesses, two medium businesses, three associations, two postsecondary institutions, and three community-based organizations.

[1] Observations are based upon:
- initial intake and level of involvement information collected in fall of 1998;
- Interview with the Bioindustry STW Partnership Director (Tom Inderlied) and Partnership Assistant Director (Donna Logsdon)
- Telephone interview with Mike Berens, Barrow Neurological(4/9/99);
- Interview with Linda Williams, Evaluator (3/26/99)
- School site visits to Peoria High School (February 10, 1999) and Navajo Elementary School (February 9, 1999)

Goal 1: System Governance and Partnership Development:

Partnership Governance and Staff

A 12-member partnership advisory board (including the Partnership Director) provides oversight and helps to refine and evaluate partnership goals. Six board members represent business partners; four, education partners; and two, postsecondary education partners. One education partner is also a labor representative. The board meets every second month.

All of the participating schools have lead teachers/STW liaisons, who serve as single points-of-contact and are responsible for implementing STW activities in their schools. The lead teachers meet on a monthly basis. In addition, all school districts have administrative representation (*e.g.*, principals, vocational specialists, and district directors of vocational education).

Each school has "teams" of teachers who meet monthly or more often, as needed, to plan curriculum integration opportunities. Navajo Elementary also has a clerical assistant who collects evaluation data, processes purchase orders, and coordinates field trips and guest speakers.

The Partnership Director (.15 FTE) reports to the advisory board, is the single point-of-contact for the partnership, is responsible for partnership development and expansion, and conducts the STW partnership/program review meetings. The Bioindustry STW Partnership also has three contracted employees (a .47 FTE Assistant Director, a .17 FTE Marketing Assistant Director, and a .17 FTE Evaluator). An administrative assistant (.40 FTE) works closely with all partnership staff. The Arizona Technology Incubator (ATI) acts as the partnership's fiscal agent.

Sustainability

The issue of sustainability has been informally addressed during board meetings. The Bioindustry STW Partnership hopes to develop plans to sustain the Bioindustry STW initiative after the end of federal funding through the establishment of a Sustainability Committee by the end of the current contract. According to the Bioindustry STW Partnership's Assistant Director, "If I had to sum it up in a paragraph, the partnership will be sustained by institutionalizing it in the schools and making it a part of every teacher's life and every teacher's classroom. The linkages between industry and parents that have been established through career days will continue. The equipment and supplies will be there long after the money has gone away."

Goal 2: Program Coordination and Integration

Program Coordination and Integration

At Peoria High School, the Bioindustry STW Partnership is coordinating STW activities with existing vocational education and cooperative education programs.

The integration of the Arizona Department of Education's (ADE's) Career Pathways is varied. Fall level of involvement data suggest that the Peoria District plans some activities around Career Pathways. Kyrene Altadena indicated that all activities are organized around Career Pathways.

Numerous connections have been made between the partnership and postsecondary institutions. For example, a Bioindustry Symposium for scientists, engineers, business people and university researchers was held in late April at ASU's Research Park. The purpose of the symposium was to strengthen the

linkages between Arizona Universities and the biotechnology industry and to identify joint opportunities for collaboration. Six Peoria students presented and six teachers participated from Peoria and Kyrene Districts, Navajo Elementary and Cortez High School. Other examples include:

- Peoria Biomed Academy students have teamed with ASU students/professors to conduct research on plant tissue culture, genetic engineering, and DNA fingerprinting;
- ASU graduate students helped staff the traveling Patterns In Nature van which visited Cerritos and Navajo schools;
- A contact has been established with ASU's Economic Development and Constituent Outreach Department.
- The Chairperson of the Mesa Community College (MCC) Life Science's Department serves on the Bioindustry STW Partnership's advisory board and has provided job shadow opportunities for students this year; and
- The BioMed Academy has made connections with Midwestern University's Osteopathic Medicine Program.

Universal Access:
School Participation and Roll-out Strategy

Although no formal roll-out strategy has been established, interviews suggest that discussions have been initiated to expand STW Bioindustry activities in existing partnering districts. Schools that have been identified for roll-out are: all grade levels at Navajo Elementary School, Yavapai Elementary School, Mohave Middle School, and Saguaro High Schools in the Scottsdale District. Kyrene Middle School will be added in the Kyrene District. Cerritos Elementary will expand to all grade levels. The partnership will also roll-out to Cheyenne Elementary in Peoria Unified School District. Desert Vista High School and Marcos de Niza are potential partners from a new district (Tempe Union High School District). Cortez High School from the Glendale Unified School District has committed to be an education partner during the next fiscal year.

Original roll-out plans in the Bioindustry STW Partnership's proposal targeted expansion to eight additional educational entities by June 30, 1999 (4 elementary schools, 2 middle/junior high schools, 1 high school, and 1 postsecondary institution). The partnership originally planned to serve 915 students. On September 30, 1998, it had four education partners and was targeting 1,315 students. By May 1999, it still had four education partners, but 2,816 students had been served. Navajo Elementary had begun implementing STW activities for K-3, in addition to planning activities for students in grades 4-6. Cerritos Elementary added STW activities for additional fifth grade students, plus students in grades one and four. Peoria High School added a "Discovery Class" for 257 ninth grade students.

Five percent of the public schools in partnering districts were "active" in the Bioindustry STW partnership. "Active" schools are summarized in Table 2. Almost 3,000 students participated in Bioindustry STW activities (May 1999).

Integration with Other Initiatives

The Partnership Director has attended GSPED Bioindustry Cluster meetings pertaining to the impact of the Workforce Investment Act of 1998. The Partnership Assistant Director serves on the Health Occupations Advisory Board of the ADE's STW Division.

The Bioindustry STW Partnership has networked with the Maricopa High Technology Industry Cluster STW Partnership, the Maricopa Tourism and Experience STW Partnership, the Software STW

Partnership, and the Arts and Humanities STW Partnership, although no specific joint ventures had been accomplished at the time of the site visit. The contracted evaluator also links the Bioindustry STW Partnership with two other partnerships with whom she contracts. Finally, the Bioindustry STW Partnership is examining potential collaboration with the Senior Industries Cluster, due to logical linkages between biotechnology research and diseases of aging.

Targeted Access for Special Populations

It is unknown how targeted special populations (e.g., out of school youth) are being served by the partnership. Navajo Elementary had a field trip to Canyon Lake for special education students and a field trip for English as a Second Language (ESL) students as well. Roll-out schools (Yavapai and Cortez) have lower socioeconomic populations. Yavapai will also serve special education students.

Table 2
"Active" School Participation for the Bioindustry STW Partnership

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active Schools" (FY 1998/99)							
	E/J	M/J	J/S	K-12	Total	School Name	# Students**	E/J	M/J	J/S	K-12	# Total	% Total
						Altadena MS	1,038		1				
						Cerritos EL	302	1					
Kyrene ESD	17	6			23	Kyrene ESD	1,340	1	1			2	9
						Biomed Academy (Peoria HS)	601			1			
Peoria Unified	24		61	2	3 2	Peoria Unified	601					1	3
						Navajo El	715	1					
Scottsdale Unified	19		6	5	30	Scottsdale Unified	715					1	3
						Barrow Neurological***	160						
						Miscellaneous	160						
Charter													
Total Public Schools	60	6	12	7	85	**Total Public Schools**	2,816	2	1	1		4	5
Private Schools													
Department of Youth Treatment													
TOTAL SCHOOLS	60	6	12	7	85	**TOTAL SCHOOLS**		2	1	1	0	4	5
Number of Students**							2,816						

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

** This table reflects unduplicated counts of students served (May 1999). Students may have participated in multiple STW experiences.
*** Barrow Neurological Institute trained 160 students from high schools throughout the state of Arizona.

STW Elementary, Middle, High School, and Postsecondary Initiatives

"The Bioindustry STW Partnership philosophy is based on the utilization of STW funding *to develop intense coverage for students through comprehensive relationships within selected school districts*." Each of the three school districts involved has distinct priorities and uses different education models (*e.g.*, Peoria uses an "academy" model.) Within this context, overall partnership goals and objectives were developed, as well as program partner goals and objectives. The following summarizes the Bioindustry STW Partnership's targeted STW implementation areas.

Curriculum Integration. The February visit to Navajo Elementary showed evidence of the integration of STW activities into the current elementary school curriculum. Bulletin boards with Bioindustry and/or

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STW content, microscopes, anatomy charts/models, and plants with grow lights were prominently displayed throughout the school and classrooms. Navajo Elementary School librarians have been using students' career interests (as indicated by completed inventories) to select books for story-time. Through the Patterns In Nature van, 150 fifth graders from Kyrene de los Cerritos were able to observe insect parts using three different types of microscopes, as part of their science curriculum.

Altadena Middle School and Cerritos Elementary School teachers developed and implemented several thematic units related to Bioindustry (e.g., Microscopy units, Biotech STW video and worksheet, focus on scientists, new fight against bacteria, "What's up with Biotech?").

Some 257 Peoria High School ninth grade students completed a first semester "Discovery Class" designed to assist students in selecting a career pathway. The Peoria High School BioMed Academy used block scheduling to align academic and vocational classes. Four Peoria High School teachers (from social studies, math, physical education, and biotechnology) planned and completed a student research project in the fall semester of 1998. Physical education students took their own blood pressures, and those of biotechnology students. Biotechnology students ran statistical tests comparing the two groups. Social studies students compared results with health trends. Math students completed linear graphing of results.

Career Interest Inventories. 266 Navajo Elementary students in grades 4-6 and special education students completed E-WOW career interest inventories. Peoria ninth grade and Altadena eighth grade students also completed career interest inventories.

Portfolios. Navajo Elementary students kept STW folders with summaries of career-related information and written lab reports. Peoria High School students completed career portfolios.

Native Garden. Plants native to Arizona were grown in classrooms by Navajo Elementary students and transplanted to outdoor plots. Students studied the effect of air, water, and soil contamination on food. Peoria High School students grew some of the plants for Navajo's Native Garden.

Guest speakers. A business representative from Barrow Neurological Institute made a presentation to 250 Navajo Elementary students in grades 4-6 in December[2] and to 150 Altadena students in grades 6-8 in April.[3] In addition, Navajo Elementary had four other guest speakers (e.g. a microbiologist and x-ray technician). Cerritos Elementary had one. At Altadena Middle School, 32 parents and professionals shadowed students for a day and gave 15-20 minute presentations on the skills needed to succeed in future careers. In addition, two guest speakers presented at Altadena Middle School.

Career Day. Students arranged all scheduling for an April Career Day at Navajo Elementary for grades 4-6. Thirty-three professional and parent presenters (two to a classroom) discussed their careers. Navajo also sponsored a Health in the Park activity for the fifth grade. Altadena Middle School had a career day in March in which more than 1,000 students in grades 6-8 participated.

Field trips. Approximately 160 students attended two half-day seminars at the Barrow Neurological Institute. Four to six high school biology students were chosen from each high school in Maricopa County. Some 404 Navajo Elementary students in grades 4-6, ESL, and special education students completed ten field trips by the end of April.

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[2] Ten parents, three teachers, and two administrators also attended the "bucket of brains" presentation.

[3] Mike Berens also made two presentations to students at Val Vista Lakes Elementary and one to students at O'Connor. These two schools are not currently education partners.

Student internship and job shadowing opportunities. Six Altadena students (two from each targeted grade level) participated in Groundhog Job Shadow Day at the Life Science Department of MCC. Fifty Peoria High School students job shadowed at the Biosphere and made a videotape of their experiences.

Fifty Peoria High School BioMed Academy students served as interns in Bioindustry-related businesses (e.g., school-based hydroponics lab, Biotech lab, and Sun Health). One Maricopa County high school sophomore will have an opportunity to be a research intern at the Barrow Neurological Institute this summer.

Goal 3: Technical Assistance

Ongoing Needs Assessment

Partnership Objective 3.4 was to "Prioritize industry needs to guide STW efforts." According to the Partnership Director and Partnership Assistant Director, this task might have been "too ambitious to accomplish." It was also felt to be an objective that needed to be worked on jointly by the Bioindustry Cluster and the STW Partnership. The issue of industry needs was going to be addressed at a Bioindustry Symposium held at the ASU Research Park. In addition, "ATI/INC, Barrow Neurological Institute, the Partnership Director, and the Partnership Assistant Director are serving as 'Assistant Directors' to provide technical assistance to the schools."

Curriculum/Assessment Initiatives (Including Career Pathways, *K-12 Workplace Skills*, Applied/contextual curriculum)

Students at Peoria High School enroll in "academies" in the tenth grade, in which they progress through a sequential series of career-related courses. Students continue to catalog their accomplishments in the career portfolio started in the ninth grade "Discovery Class." In addition to this "passport," students will receive a career-related endorsement on their high school diploma. This serves as a portable skills credential, and is based upon SCANS skills.

The Kyrene District has a new science curriculum that is aligned with State Science Standards. Some of the Patterns in Nature van curricula were adapted to the fifth grade level. In addition, Kyrene has recently hired a new person at the district level to be responsible for curriculum.

Professional Development Initiatives (Including business and educators)

The Bioindustry STW Partnership's professional development initiatives consist of teacher job shadowing, curriculum-specific training, inservices, high school teacher internships at Bioindustry businesses, and training of Bioindustry professionals. Progress in accomplishment of professional development objectives at the time of the site visit included:

- Job shadowing by two teachers from Peoria High School.
- A two-day Bioindustry Institute for all Navajo Elementary teachers (August 1998).
- Patterns in Nature van training for five Navajo and Kyrene Teachers.
- An inservice presentation to 13 science and math teachers at Kyrene Altadena Middle School.
- Four training sessions at monthly lead teacher STW meetings (e.g., training on careers, career requirements, and use of career surveys).
- Week-long training (30 hours) for 24 teachers to be conducted June 14-17. Training will include an introduction to STW and Bioindustry and possible ways to integrate STW activities into curriculum. This teacher training replaced attendance for three teachers' Bioindustry-sponsored forums held

during the year. The professional development week was initiated because of the scarcity of bioindustry forums in Arizona.

- Teacher summer internships for up to ten teachers at Barrow Neurological Institute, Arizona Technology Incubator, Harrington Arthritis Foundation, and Challenger Worldwide. At the time of the site visit, the partnership was in the process of matching teacher time slots and interests.
- Desert Botanical Garden Workshop for teachers (planned for summer).
- May demonstration to at least 12 Bioindustry professionals on the "methodology for delivering several types of Bioindustry classroom experiences."

Goal 4: Community Involvement
(Including employers and the community-at-large)

Per the 1998-99 proposal, the Bioindustry STW Partnership expected to have a total of 16 businesses, one postsecondary, and five community-based organization partners by the end of the contract cycle. As of September 30, 1998, they had ten business/other partners. By May 1999 (Table 3), the Bioindustry STW Partnership had 16 business,[4] two postsecondary, and three community-based partners. To increase the number of business partners, the advisory board formed a recruitment committee in March.

The Partnership has attempted to increase business involvement via a Bioindustry presentation package which includes a "bucket of brains" video and a handout on developmental stages of children. In addition, approximately 220 businesses from the Bioindustry Directory were sent promotional materials about the partnership and an "industry recruitment survey." Eight of the businesses contacted asked for follow-up general information packets.

At the time of the site visit, the Partnership Assistant Director was in the process of making a business resource list for teachers cataloguing activities that businesses are willing to provide (e.g., job shadowing, field trips). A planned Bioindustry STW Partnership website was complete but had not been integrated into the Bioindustry Cluster website.

Parental involvement has been stressed on the individual school level. Parent volunteers were recognized at a breakfast held at Kyrene School. School career fairs at Kyrene and Navajo involved parents. Navajo teachers made monthly presentations about STW activities to the school parent/teacher/student association. Two parents have made presentations to a sixth grade class at Navajo Elementary and three have made presentations to a fourth grade class. Navajo has a parent community center. Cerritos Elementary School included parents in the Patterns in Nature Van visit and provided handouts to parents on STW participation at the Cerritos Learning Festival in April. A display was erected for parents describing STW activities.

A series of brown bag lunches (research seminars for the general public) were not held. A Staff Scientist for Barrow Neurological Institute made one presentation at the Kiwanis and one at the Rotary Club in lieu of the brown bag lunches. Dr. Berens also presented STW Bioindustry participation at a Venture Capital symposium for professionals in December. ATI/INC facilitated Groundhog Job Shadow Day, coordinated the scheduling of the Patterns in Nature van at elementary schools, and arranged trips to the Biosphere and MCC.

[4] This includes 3 business association partners.

Table 3
Active Business/Other Partners for the Bioindustry of STW Partnership (FY 1998-99)

Partner Name	Size of Business*			Associations	PS Education	CBO	# Total
	0-49	50-499	500+				
Advanced Insulation Manufacturing	1						
Amethyst Technologies, Inc.	1						
Harrington Arthritis Research Center	1						
Human Biologies International	1						
LandTech, Inc.	1						
Noraxon USA, Inc	1						
Orion Electronics, Inc.	1						
Pipeline Technology, Inc.	1						
Regenesis Biomedical, Inc.	1						
Rowpar Pharmaceuticals	1						
Zerimar Medical Enterprises	1						
Total 0-49	11						11
Barrow Neurological Institute		1					
Challenger Worldwide, Inc.		1					
Total 50-499		2					2
TOTAL BUSINESS PARTNERS	11	2					13
Arizona Crop Protection Association				1			
Arizona Technology Incubator				1			
Industry Network Corporation				1			
TOTAL ASSOCIATIONS				3			3
Mesa Community College					1		
Arizona State University					1		
TOTAL POSTSECONDARY EDUCATION					2		2
Scottsdale Chamber of Commerce						1	
Greater Phoenix Economic Council						1	
OAS Group						1	
TOTAL COMMUNITY-BASED ORGANIZATIONS						3	3
TOTAL BUSINESS/OTHER PARTNERS	11	2	0	3	2	3	21

* Number of Employees

Goal 5: Public Awareness

The partnership uses a variety of strategies to publicize its STW activities. The Partnership Marketing Assistant Director completed a marketing plan for each school in November 1998. One-on-one meetings with school administrators and business leaders have been used to enlist new partners. So have "bucket of brains" presentations. Newspaper articles, multiple press releases, and three articles in "Arizona Biobrief" reached approximately 26,000 people. Three articles in school and district newsletters also informed the public about the Bioindustry STW Partnership. In addition, the Director presented STW to the Scottsdale Chamber of Commerce and arranged for distribution of STW materials at several events, including the Arizona Bioindustry Symposium.

Goal 6: System Evaluation

The Bioindustry STW Partnership participates in the overall state evaluation plan, which incorporates both state and federal reporting responsibilities. In addition, the Partnership Director has contracted with an outside consultant to assurance compliance with state evaluation requirements, which include a partnership self-evaluation plan. The evaluator has helped to clarify and modify goals and objectives, determine standard measurements and indicators, develop surveys/forms to measure student/teacher/business perceptions, collect empirical data, and document evidence of success.

Discussion

Partnership Assets

The partnership exceeded their original goal for the number of students served. In particular, interviewees mentioned the impact the partnership had on total school culture at Navajo Elementary, the district-wide implementation of the "Discovery Class" in the Peoria District, and an increase in the number of students served at Peoria High School and Kyrene schools. The Bioindustry STW Partnership has been actively engaged in providing students with integrated school-based and work-based STW activities.

Postsecondary support for the partnership has been strong. The Bioindustry Symposium and assistance from ASU and MCC are cited as examples. Local parental involvement on the school level is also partnership strength. At Navajo Elementary School, 108 parent responses to a Bioindustry STW evaluation indicated that 50.9% have participated in one or more STW activities this year.

Great efforts have been made to ensure compliance with state and federal evaluation requirements. The Bioindustry STW Partnership evaluator has been dedicated in the formulation of a partnership self-evaluation plan.

Partnership Challenges

The Partnership Director, Assistant Director, and business and school partners listed challenges faced by the Bioindustry STW Partnership this year. The following is a list of difficulties encountered:

- Infancy of the Bioindustry Cluster. Bioindustry is an emerging industry. The GSPED industry cluster was established two years ago and has 450 members, many of which are extremely small and located throughout the State. The relative "newness" of the field complicated integration of Bioindustry curriculum into schools.
- Interpretation of proposal. The current key staff were not involved in writing the proposal. The partnership had difficulty interpreting some of the written objectives (e.g., "Recruit 15 additional educators to participate in professional development")
- Business partner reorganization. One of the business partners (the Arizona Crop Protection Association) was reorganized. The flux in the organization and change of key personnel impacted a planned teacher internship with Monsanto.
- Equipment-related problems. A generator was needed to run the "PIN" van, causing a delay of several months in the site visit.
- Job shadowing/Student internships. The primary factors deterring the development of job shadowing and student internship opportunities were:
  - Lack of transportation;
  - Lack of commitment by businesses to take interns:

- Teacher training. Partnership-wide professional development activities were complicated by different schedules for the three partnering school districts. Lack of substitutes was another challenge.
- Field trips. Only Navajo had money in their budget for field trips. Lack of transportation and few substitute teachers were other obstacles. Peoria met the "field trip challenge" through block scheduling, or "blending" students with another teacher's class. Another method used by the partnership was using guest speakers in lieu of field trips.
- Business representatives as substitute teachers. The plan to use Bioindustry representatives to substitute for teachers was scrapped. The business people were not certified as substitutes, which would have necessitated that a board-approved teacher or substitute teacher accompany them.
- Native American garden. The garden at Navajo Elementary was delayed by drainage problems. Teachers and students problem-solved by growing plants in the classrooms, until the garden was ready.
- Web page. A planned Navajo Elementary website was not completed on schedule, because the parent providing technical assistance was unable to continue. However, it is expected to be completed by the end of the contract period.

Summary and Suggestions

The Bioindustry STW Partnership has made efforts to align with the six State goal areas. Partnership governance structure is well established, with regular opportunities for feedback and programmatic revision. Bioindustry GSPED cluster businesses are represented in partnership management. With the exception of community-based organizations, business/other recruitment goals have been met. The issue of sustainability has been informally examined.

The partnership coordinates some activities with existing educational and/or training programs and has made higher education linkages. Original school roll-out goals indicated in the 1998-99 proposal have not been met, although the number of targeted students served has been exceeded. Roll-out plans for ensuing years have been written.

The Bioindustry STW Partnership has made attempts to network with other STW partnerships. Targeted access for special populations has been limited. Students are participating in school-based, work-based, and limited connecting activities.

Students complete career portfolios. Peoria High School students receive career endorsements on their high school diplomas. Kyrene District is aligning their new science curriculum with State Science Standards. Teachers have participated in job shadowing, inservices, and teacher internships. Business professionals have been trained to present in classrooms.

ATI/INC and Barrow Neurological Institute personnel have made presentations to schools and businesses and coordinated other STW opportunities for students. The partnership is currently working to match business resources with school needs. Parents have been involved at each partner school.

A mass business recruitment mailing (i.e., a business recruitment plan) was launched. School marketing plans, one-on-one meetings, presentations, and articles in newspapers and school/district newsletters have been used to market the partnership. The partnership has actively participated in state, national, and self-evaluation efforts.

As for partnership-level goals, interviewees stated, "perhaps we were overly ambitious." The partnership outlined five separate goal areas and twenty separate objectives. Of these objectives, one-quarter of the original deadlines were moved back from one to six months[5].

Of the five partnership objectives pertaining to partnership goal 1 (public awareness), three have been accomplished to date (1.1, 1.2, 1.3). It is anticipated that the website (1.5) will be completed prior to the end of the contract period. As for objective 1.4 "Promote bioindustry activities through a minimum of eight media offerings," the State evaluator was unclear whether this objective would be met. Based on the partnership's response to a site visit report draft, seven written articles were published and two TV appearances were aired. Both objectives, relating to partnership goal 2 (recruitment plan), will have been met by June 30, 1999. Fulfillment of partnership goal 3 (long-term sustainability) and goal 4 (proliferation of a STW Workforce Development model) are still in process. It is anticipated that the partnership will meet all objectives pertaining to partnership goal 5 (an effective evaluation system).

For the most part, education partners will meet their identified 1998-99 goals and objectives. The BioMed Academy at Peoria High School is operational. The Biomed Academy has exceeded the number of originally targeted students (75) by 269. The ninth grade "Discovery Class" was implemented throughout the District. Curriculum planning and integration, student work experiences, administration of career interest inventories, and professional development for teachers did occur. Peoria High School staff said that eight guest speakers had been brought into the labs.

Navajo Elementary was able to purchase resource materials and equipment to enhance curriculum more quickly than anticipated. Students will have completed portfolios, developed personal health programs, planted a native garden, taken field trips, conducted a career day, and completed interest inventories by the end of the school year. Teachers did participate in a two-day Institute. Navajo's website is expected to be operational by year-end.

For Kyrene Altadena Middle School and Kyrene Cerritos Elementary School, all team members and participating students were identified. The partner schools attempted to integrate Bioindustry/STW elements into the District science curriculum. Fifth grade students were exposed to the Patterns in Nature van. Bioindustry-related thematic units were developed. Because the partnership website was unavailable, students were not able to use this resource. However, district students did have access to the Internet.

Middle school students completed career interest inventories, had exposure to two guest speakers, and participated in a career day. Six middle school students job shadowed, even though this was not an original objective. Students from Cerritos Elementary had two guest speakers, the Patterns in Nature van experience, but no field trip opportunities. Teacher visits to bioindustry facilities and intern/job shadowing for teachers will be accomplished by the end of the contract period, per clarification by the partnership. ("Members of the program will visit at least one bioindustry facility;" and "Two members will intern/job shadow with at least two participating GSPED Bioindustry STW Partners.") One middle school teacher did accompany six students on a job shadow experience to MCC's Life Sciences Department and shadowed the chair of the Department. Some 170 students participated in an "invention convention," and 400 sixth grade students participated in Science Fair Projects.

Perhaps the Bioindustry STW Partnership was the most challenged in the goals and objectives set by two participating business partners. Four career awareness/exploration presentations for partnering schools were accomplished, although not as scheduled. Some 160 high school students participated in two

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[5] This is likely a function of optimistic thinking in setting original deadline dates. This does not imply that the partnership had not committed to accomplishing each objective by the intended deadline.

research seminars at Barrow Neurological Institute. Three proposed teacher/technician forums, three parent meetings with industry representatives, three of six brown bag lunches, and mentoring of K-12 students by university students did not occur. In lieu of these activities, a week-long professional development activity was scheduled for June and presentations were made to two community groups. A "Train the Trainer" forum for bioindustry professionals will be conducted. It is anticipated that a high school student and up to ten teachers will have the opportunities to work in a variety of bioindustry settings this summer.

ATI/INC was able to meet goal 1.5 ("Expand by 50% the number of identified business partners committed to the goals of the partnership.) Teachers from three partnering LEA's did attend the Bioindustry Symposium. Parents have met with bioindustry professionals through exposure to student activities (e.g., career fairs and participation in field trips). Cerritos was the only partner to hold "parent meetings." High school students and teachers will have participated in internship experiences. ATI/INC has supported Groundhog Job Shadow Day activities and provided teacher training/on-site availability of the Patterns in Nature van to participating schools.

A methodology for delivering several types of bioindustry classroom experiences is being written and videotaped. Seven out of eight projected bioindustry classrooms experiences have been presented. Some 770 students participated in 13 field trips/industry site visits. (Objective 1.3 had targeted 200 students in 15 site visits).

On a final note, the number of administrative positions for the partnership appears to be high, given the small number of schools served. The Partnership Director is ostensibly the contact point, but is only part-time (.15 FTE). The Assistant Director (at .47 FTE) really handles the day-to-day operations of the partnership and is the de facto point-of-contact.

Additional suggestions for consideration by the partnership include:

- The Bioindustry STW Partnership needs to more formally address how the partnership will be expanded to additional school districts/business partners and how the STW system will be sustained when federal funding ends. In particular, the partnership might consider how administrative positions could be consolidated or streamlined.
- The partnership should continue to refine goals and objectives in light of what is accomplishable, given current resources. Key partnership staff should have a clear understanding of all goals and objectives, even if they are not involved in the writing of the proposal.
- Business partner involvement needs to be increased beyond the two partners who were most active during the first year of STW activity implementation. The list of business resources should help in this regard.
- If field trips are difficult to arrange, the partnership might consider alternative career awareness and exploration work-based activities (*e.g.*, guest speakers and presentations). Field trips should be directly applicable to bioindustry experiences, rather than tangentially related.
- Teacher internship and training opportunities should be scheduled at the beginning of a contract period, so that learning can be integrated into the curriculum during the year.

High Technology Industry Cluster STW Partnership

Site Visit: March 10, 1999[1]

Region Served: Maricopa County

FY 1998-99 funding: $422,893
GSPED Cluster: High Technology

School Profile

The High Technology Industry Cluster School To Work (HTIC/STW) Partnership serves students in 13 school districts (six unified, three elementary, and four high schools). In addition, one charter school is an education partner. Students from 65 schools receive STW services.[2] The HTIC/STW Partnership includes schools enrolling more than 81,000 students in grades pre-kindergarten through 12 in 1998-99 (as shown in Table 1).

Table 1
Total Student Enrollment for the HTIC/STW Partnership (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)*
Grades Pre-K through 6	211,078
Grades 7 through 8	13,590
Grades 9 through 12	43,716
Ungraded Elementary (K-8)	68
Ungraded Secondary (9-12)	10
TOTAL	78,492

*Enrollment data reflect 60 schools for which data were available of the 65 schools identified in this partnership.

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

The HTIC/STW Partnership has 75 business/other partners (61 business/associations, seven postsecondary education, three community-based organizations, and four governmental entities). Of the business partners, 20% employ less than 50 employees, 39% employ between 50 and 499 employees, and 15% are large firms (500 or more employees). Twenty-six percent are associations with multiple members.

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[1] Observations are based upon:
- Initial intake and level of involvement information collected in fall of 1998;
- Interview with the HTIC/STW Partnership Director Caroline VanIngen- Dunn on 3/10/99;
- Telephone interview with Roni Reichardt, evaluator (4/22/99); and
- School site visits to Lowell Elementary School and Stapley Junior High School (3/10/99).

[2] In addition, ten elementary schools (Alma, Entz, Holmes, Keller, MacArthur, McKillips Learning Center, O'Connor, Robson, and Sunridge Learning Center) and one high school (Camelback) are considered education partners, although their students are not participating in STW activities.

Goal 1: System Governance and Partnership Development:

Partnership Governance and Staff

The HTIC/STW Partnership has a 19-member advisory board. Members represent three school districts, 11 businesses/industries, one association, three postsecondary institutions, and one governmental agency. The advisory board meets monthly to monitor partnership progress. In addition, members serve on subcommittees that provide direction in key areas (compliance, evaluation, programs, public awareness/recruitment, and sustainment).

A three-person management team is responsible for daily operation of the partnership. It is comprised of a half-time Partnership Director (.50 FTE) and two contracted employees (a .10 FTE Evaluator and a .20 FTE Connecting Activities and Systems Integrator). The Partnership Director serves as single point-of-contact for the partnership, leads the management team, oversees the implementation and evaluation of system elements, works to raise funds and leverage resources, and manages the partnership's activities and budget. The Evaluator is responsible for evaluation, recruitment, and marketing/public awareness activities. The Connecting Activities and Systems Integrator is accountable for daily operations, goal refinement, needs assessment, and development of a roll-out implementation plan.

Each of the five partnership programs (i.e., Roots and Wings, Project Pride, the Delta Partnership, MESA, and Chip Camp) has a staff person responsible for program coordination and implementation in partnering schools. In addition, ten junior and senior high schools in the Mesa District have volunteer program coordinators. They are responsible for STW activity implementation, establishing business connections, and measuring program success. All of the participating coordinators who act as STW coaches are career counselors.

The Mesa Public School District serves as the partnership's fiscal agent and has hired a 100% FTE administrative assistant to support partnership activities.

Sustainability

The HTIC/STW Partnership has developed a detailed self-sustainment plan that has been approved by the advisory board. Sustainability is approached from system, partnership, program, and intervention (i.e., career awareness, exploration, and preparation) levels. The partnership plans to accomplish system sustainment through linkages with the State Workforce Development System. Industry-based, school-based, and community-based partnership activities will be coordinated and partially funded by the GSPED industry cluster.[3] Programs will survive by having long-term funding in place, district-wide foci, development of individual sustainability plans, and business/education partner commitments. Elementary schools and civic organizations will sustain career awareness activities, while business and industry will sustain career exploration and preparation activities.

A formal roll-out plan will be completed by June 1999. Partnership roll-out plans at the time of the site visit were to:

- Institutionalize the Delta Industry/Education Partnership as a new civic organization (possibly a 501(c)(3);

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[3] Examples of industry-based partnerships are GSPED clusters and the High Technology "Industry Voice." School-based partnerships are Fees Elementary/Micro Rel, Red Mountain High School/Boeing, TRW/ Apache, Queen Creek, and Mesa Schools. Community-based partnerships are Delta and the Tempe Tri-District.

- Roll-out Roots and Wings and Project Pride into new classes/schools and other GSPED Industry clusters;
- Establish a community-based partnership in Tempe's tri-district schools; and
- Implement the sustainment plan.

Goal 2: Program Coordination and Integration

Program Coordination and Integration

Programs chosen for the HTIC/STW Partnership have "established track records" and histories of implementation within specific school districts. Three programs (Roots and Wings, Project Pride, and the Delta Partnership) coordinate activities and linkages in the Mesa District. Roots and Wings also has established linkages with schools funded by a Maricopa County Juvenile Courts Delinquency Prevention Grant. Project Pride has linkages with other junior high schools sponsored by TRW funds. In addition, the HTIC/STW Partnership has made efforts to link with established STW venues (e.g., regional conferences and annual vocational education conferences).

State-collected fall "Level of Involvement" data indicate that, in 14 of the 18 (78%) responding partner high schools, some activities are organized around Career Pathways. Some 64% of the middle/junior high school respondents say some activities are organized around Career Pathways. However, the "Level of Involvement" survey instrument does not request which pathways are in place within these schools, so it is unknown which schools are implementing High Technology tracks for students.

Some connections have been made with higher education. Roots and Wings has partnered with Chandler-Gilbert Community College and will be planning monthly activities. Elementary students have taken field trips to Gateway, Chandler/Gilbert and Chandler/Gilbert/Williams Community College campuses. Chip Camp and MESA have close ties to Arizona State University (ASU). Chip Camp students are able to enroll in Achieving a College Education (ACE) program at Glendale Community College.

Universal Access: School Participation and Roll-out Strategy

On September 30, 1998, the HTIC/STW Partnership had 50 school partners. It had hoped to count nine elementary, 20 middle/junior high, 28 high schools, and one charter school by the end of June 1999, for a total of 58 schools. The current school roster (Table 2) shows 26 elementary, 16 middle/junior high, 22 high schools, and one charter school, for a total of 65 schools.

Of the public schools in partnering districts, 25% were "active" in the HTIC/STW Partnership as of May 1999. "Active" schools are summarized in Table 2. An estimated 16,410 students participated in HTIC/STW activities.

A formal roll-out strategy has been established for the next contractual year. The partnership has targeted expansion in five partner school districts (Tempe Elementary School District, Kyrene Elementary School District, Tempe Union High School District, Phoenix Union High School District, and Peoria Unified School District). The HTIC/STW Partnership will roll-out to two Phoenix High Schools (Camelback and North High Schools.) Ninth grade students from all six Peoria high schools will be served. A comprehensive "Tempe Community Partnership," similar to the Delta Partnership, will include 22 elementary, middle/junior high, and high schools.

Table 2
"Active" School Participation for the HTIC/STW Partnership

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active Schools" (FY 1998/99)							
	E/J	M/J	J/S	K-12	Total	School Name	# Students**	E/J	M/J	J/S	K-12	# Total	% Total
						Willis JH			1				
Chandler Unified	16	3	2	2	23	Chandler Unified			1			1	4
						Dysart HS				1			
Dysart Unified	4	1	1		6	Dysart Unified				1		1	17
						Gilbert HS				1			
						Highland HS				1			
						Superstition Springs EL		1					
Gilbert Unified	4	16	5		25	Gilbert Unified		1		2		3	12
						Apollo HS				1			
						Glendale HS				1			
						Independence HS				1			
						Trevor Brown HS				1			
Glendale HSD			11	1	12	Glendale HSD				4		4	33
						Altadena MS			1				
Kyrene ESD	17	6			23	Kyrene ESD			1			1	4
						Brimhall JH**			1				
						Carson JH			1				
						Crismon El		1					
						Dobson HS				1			
						Eisenhower El		1					
						Emerson El		1					
						Falcon Hill El		1					
						Fremont JH**			1				
						Frost El		1					
						Hendrix JH			1				
						Hermosa Vista El		1					
						Ishikawa El		1					
						Jefferson EL		1					
						Johnson El		1					
						Kerr EL		1					
						Kino JH			1				
						Lindbergh EL		1					
						Longfellow EL		1					
						Lowell EL		1					
						Madison EL		1					
						Mendoza El		1					
						Mesa JH**				1			
						Mesa HS				1			
						Mountain View HS				1			
						Poston JH			1				
						Powell JH			1				
						Red Mountain HS				1			
						Red Mt. Ranch EL		1					
						Redbird El		1					
						Rhodes JH			1				
						Salk El		1					
						Shepherd JH			1				
						Sirrine El		1					
						Stapley JH			1				
						Taft El		1					
						Taylor JH			1				
						Washington El		1					
						Webster El		1					
						Westwood HS				1			
						Whittier EL		1					

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Table 2 continued

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active Schools" (FY 1998/99)							
	E/J	M/J	J/S	K-12	Total	School Name	# Students**	E/J	M/J	J/S	K-12	# Total	% Total
Mesa Unified	54	12	8	8	82	Mesa Unified		23	12	5		40	49
						Cactus HS				1			
						Peoria HS				1			
Peoria Unified	24		0	2	3 2	Peoria Unified				2		2	0
						Alhambra				1			
						Maryvale HS				1			
						South Mountain				1			
Phoenix UHSD			13	1	14	Phoenix UHSD				3		3	21
						Queen Creek HS				1			
Queen Creek Unified	2	1	1		4	Queen Creek Unified				1		1	25
						Connolly MS			1				
						Gilliland MS			1				
Tempe ESD	22	3			25	Tempe ESD			2			2	8
						Marcos de Niza HS				1			
						McClintock HS				1			
						Tempe HS				1			
Tempe UHSD			8		8	Tempe UHSD				3		3	38
						Tolleson HS				1			
Tolleson HSD			2		2	Tolleson HSD				1		1	50
Charter Schools						Charter Schools							
Total Public Schools	143	42	57	14	256	Total Public Schools	16,410	24	16	21	0	61	25
Private Schools													
Department of Youth Treatment													
TOTAL SCHOOLS	143	42	57	14	256	TOTAL SCHOOLS		24	16	21	0	61	25
Number of Students***							16,410						

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

** TRW-sponsored Project Pride

*** The number of students is estimated/hypothetical as of May 1999.

Integration with Other Initiatives

The HTIC/STW Partnership has collaborated with other partnerships operating in overlapping schools and districts (e.g., the Maricopa Tourism and Experience STW Partnership and the Software STW Partnership in Mesa). Maricopa County Project Pride schools work closely with schools located outside the county.

Targeted Access for Special Populations

Although the partnership does not have specific plans for including special populations (e.g. out-of-school youth), some students with special characteristics are being served. The Roots and Wings program is serving mentally challenged students from an intermediate classroom at Longfellow Elementary and two special education classes at Whittier Elementary School.

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STW Elementary, Middle, High School, and Postsecondary Initiatives

The HTIC/STW Partnership has five programmatic building blocks. Three of the program foci are comprehensive, and two are targeted. Brief descriptions of the STW elementary, middle, and high school initiatives follow.

Roots and Wings is a targeted K-6 elementary-school program operating in seven schools within the Mesa District.[4] In 1998-99, the program is taking place in 32 out of a possible 33 first-grade classrooms, 25 out of a possible 26 sixth-grade classrooms, one intermediate (4-6) classroom, and two special education classrooms. Plans for the next year include roll-out to the second and fifth grade levels in participating schools. School counselors and/or classroom teachers are responsible for program implementation. Program components include:

Roots Components

- Students establish their own student education plans (SEPs), in that they set and monitor one to two self-improvement goals per semester. Both parents and teachers sign and approve goals.
- Student portfolios include their SEPs, career/life skills materials, interest inventories, career research, and samples of their "best work."
- Teachers are asked to identify key concepts in academic curriculum that could be reinforced by applied learning examples, career skills lessons, field trips, or guest speakers.
- Four schools identified a particular behavior they wished to emphasize during the year (e.g., attendance, dress and grooming, and good work habits) and establish school-wide behavior plans.

Wings Components

- Sixth grade students complete the Career Game Explorer Interest Inventory.
- Career awareness activities include field trips, guest speakers, books, videos, in-class lessons, and career fairs. Eleven schools have gone on field trips to EVIT. Five schools have gone on field trips to community colleges. Guest speakers from ASU have visited sixth grade Jefferson Elementary students. Superstition Springs Elementary put on a career fair as part of its Roots and Wings activities.
- Sixth-grade students complete career exploration research projects based upon computerized results of interest inventories. Students also learn about career clusters through field trips, in-class lessons, monthly mini-assemblies, and books (*e.g.*, "Children's Occupational Outlook Handbook" and "Children's Dictionary of Occupations.")
- Students learn "soft" career skills (*e.g.*, "people" skills, written and oral communication, decision making, problem solving, and time/resource management). One school created a club that used student incentives to promote school attendance.

Project Pride is a targeted middle/junior high school program in grades 6-9 serving students in 13 schools in four districts.[5] Outside Maricopa County, Project Pride serves four schools in two districts. Program components include:

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[4] Superstition Springs Elementary is actually part of the Gilbert District. In addition to the initially targeted seven schools, students at ten additional Mesa elementary schools have been exposed to Roots and Wings curriculum elements to some degree.

[5] This count includes one charter school.

- Project Pride uses a four-unit, 16-module curriculum. Implementation is designed to be used either in a semester or year-long format. According to staff, "School principals select a content area where the Project Pride curriculum would best serve their already existing curriculum to enhance or augment their student's learning experience." In addition, Project Pride is being adapted to include education modules from the Federal Aviation Administration Association and other "Areas of Expertise." In lieu of student workbooks, schools were provided with master copies of the Project Pride curriculum (e.g., handouts, quizzes, and worksheets).
- Students work in small teams (5-9 students) to brainstorm, plan, and budget and implement a project. Each project is presented to a board of business partners.
- Guest speakers are drawn from the partnership's "Areas of Expertise" (i.e., industry and civic business partners). "Each participating school will have had a classroom visit with an outside speaker."
- Stapley Junior High school had field trips.
- The process of matching experts to schools is ongoing. Organizations from the "Areas of Expertise" list will not be matched to only one specific school. "Each of our participating schools will have the opportunity of having 'exposure' and contact with a variety of these organizations in a variety of ways."

The Delta Partnership is a comprehensive community-based partnership targeting students in grades 5-12 in 33 Mesa schools. Sixteen elementary schools participated in the Flight Center, all 12 middle schools participated in Choices, and all five high schools were active in shadowing and internship programs, among others. While Roots and Wings and Project Pride are considered components of Delta, their schools are not included in this profile. Program elements of the Delta Partnership include:

Elementary school components:

- Business and Industry field trips.
- School-wide career related activities (i.e., career fairs).
- Approximately 1,400 fifth grade students from 16 elementary schools have used the two full-size motion-based simulators[6] built by Boeing retirees. A technology trainer for the Mesa District coordinates the Lowell Flight Center and arranges for student exposure to the simulators as a culminating experience for the fifth grade "flight" unit. While on-site at the Flight Center, students also conduct experiments illustrating the Bernoulli principle and use wood simulators made by Red Mountain High School students.

Middle/junior high school components:

- "Choices" is a two-hour career exploration package developed by U.S. West for ninth grade students. Guest presenters from business and industry emphasize the relationship between choices, self-discipline, and career options. All ninth graders (approximately 4,000 students) from 12 middle/junior high schools will have participated in Choices by the end of June 1999.

High School components:

- "Communications for the 21st Century," a technical writing program, was piloted this year at Red Mountain High School. Some 25 junior and senior students worked in small teams to develop industry-related projects. Thirteen Boeing volunteers were project judges and "team" consultants. Four teachers served as project coaches.

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[6] One simulator is a fixed-wing plane; the other, a helicopter. Another fixed-wing simulator is being built.

- Curriculum alignment with a high-technology focus (e.g., technical math class at Red Mountain High School, "strut class" emphasizing computer awareness/utilization activities)
- Boeing sponsored a one-hour "soft skills" orientation for all 792 Red Mountain High School seniors.
- At the time of the site visit, 100 students from Red Mountain High School had taken four out of a planned 20 partnership-sponsored field trips. Per the Partnership Director, "Other field trips were conducted with District funds. Additional field trips are planned."
- Student internships/job shadowing (e.g., Boeing has six interns in grade 12 from Red Mountain High School).

The Mathematics, Engineering, Science Achievement (MESA) Program is a year-round program designed to expose underrepresented students to hands-on math, engineering, and science activities. The original intent of the HTIC/STW was to fund 12 students in grades 9-10 in a summer engineering program on a university campus. MESA found other means to fund the summer residential program, so at the time of the site visit, the partnership was negotiating to support year-round MESA activities and a culminating event for student. However, the original intent to subsidize 12 student registrations at the summer residential program was preferred by the State; final negotiations are in process.

Chip Camp is a summer program that was piloted last year. Twenty-nine (29) Chip Camp students were exposed to the manufacturing semiconductor industry through a five-day, overnight program. Students participated in hands-on physics/science classroom activities and field trips to industry sites. Chip Camp draws students from schools valley-wide.

Goal 3: Technical Assistance

Ongoing Needs Assessment

The advisory board and Delta Partnership examine needs in monthly meetings. The management team assesses needs on an ongoing basis. Program staff provides technical support and monitoring to the five programs.

Curriculum/Assessment Initiatives (Including Career Pathways, *K-12 Workplace Skills*, Applied/contextual curriculum)

The HTIC/STW Partnership has been developing a high technology benchmarking system. Program indicators have been devised. "Areas of Expertise" organizations have been working to identify industry priorities (i.e., workplace standards) and to link them to State standards.

The program staff director for the Roots and Wings program has developed a sample matrix to align the program with Arizona Workplace Skills Standards, Arizona Academic Standards, Mesa Public Schools Guidance Standards, and National Standards.[7] Project Pride and Chip Camp have been working on linking curriculum to State Standards.

Professional Development Initiatives (Including business and educators)

The program staff director for Roots and Wings conducted a fall STW orientation for the principals, counselors, first and sixth-grade teachers, and SIAC committee members of new partner schools. Plans

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[7] National Career Development Guidelines developed by NOICC (National Occupational Information Coordinating Committee) and SCA (American School Counselor Assn.)

for next year include training additional trainers/facilitators and adapting the training package to offer an 1 to 1½ hour inservice.

Project Pride held two fall 1998 training sessions for teachers and counselors. In early May, the same participants are meeting to present their completed school projects and to assess the success of the program. Business and civic partners will be in attendance at the spring meeting to help plan next year's program.
Professional Development opportunities are a key aspect of the Delta Partnership. At the time of the site visits, 57 business/industry exchanges had occurred through the partnership's auspices. Six joint department meetings had been held. Principals, counselors, and teachers had received inservice training on the technical application of academics. In the Mesa schools, 26 teachers participated in Phoenix 99's—Fly A Teacher Program. There were 15 summer teacher internships planned.

Goal 4: Community Involvement
(Including employers and the community-at-large)

On September 30, 1998, the HTIC/STW Partnership had 36 business/other partners. Three organizations, four businesses (one small, one medium, two large), and two post-secondary institutions were roll-out targets for the 1998-99 year (per the partnership's proposal). By May 1999 (Table 3), the partnership had 75 business/other partners.

The Delta Partnership encourages community input. Delta has regularly scheduled monthly meetings with published agendas. Legislators, parents, school board members, businesses, and counselors are invited to attend meetings and participate in HTIC/STW. Furthermore, the Delta Partnership has a website with an "Areas of Expertise" list of existing community organizations willing to provide volunteers for the schools/other programs. Examples of Delta's community involvement include: Established linkages with Mesa Chamber of Commerce executive shadowing program and a full-size motion-based flight simulator built by Boeing retirees, at Chandler-Gilbert Community College/Williams facilities, with Boeing finances.

Community-based organizations have been active in the partnership. Guest speakers for Roots and Wings have been provided by the Save the Family foundation. Junior Achievement and Future Cities of America were linked with the HTIC/STW Partnership in Groundhog Job Shadow Day. TRW has helped to fund Project Pride at three Mesa junior high schools. "Tempe's Promise" is beginning to work with the partnership. HTIC/STW is also involved in the Society of Women Engineers' National Convention and SuCcESs! (Summer Camp with Engineers and Scientists) being held in June at the Phoenix Civic Plaza.

Parents also are included in partnership activities. In Roots and Wings, parents are invited to speak about their work at career fairs, complete adult versions of career games interest inventories, and participate in the development of their children's SEPs. Red Mountain Ranch Elementary's hands-on science activity program—Science Experimentation Exploration and Knowledge (SEEK)—brings parents and community members into classrooms to teach.

Table 3
Active Business/Other Partners for the HTIC/STW STW Partnership (FY 1998-99)

Partner Name	Size of Business*			Associations	PS Education	Government	CBO	# Total
	0-49	50-499	500+					
Culture Connection	1							
Eurest Dining Services	1							
Falcon Field Airport Administration	1							
JV Consulting	1							
Kett Engineering	1							
Lamro Engraving	1							
Landmark Restaurant	1							
Masons	1							
Methods West Machine Tool	1							
Mimi's Café	1							
One Stop Market	1							
P.E.P. Consulting	1							
Red Lobster Restaurant	1							
Rosarita Mexican Foods	1							
TOTAL 0-49	14							14
Air Products and Chemicals		1						
Arizona Wing Confederate Air Force		1						
Arizona Precision Machines		1						
Arizona Rotorcraft		1						
Auto Workforce Development Team		1						
Border's Books		1						
Challenger Learning Center		1						
Empire Southwest		1						
GM Proving Grounds		1						
GP & Associates & Fountain Valley Instruments Inc.		1						
Gwynne Systems Integration		1						
IPEC/Planar		1						
Johnson Controls		1						
Karlson Machine Works		1						
KPNX TV Channel 12		1						
Mesa Tribune		1						
Medtronic,Inc./MicroRel		1						
Microchip		1						
Modern Industries		1						
Olin		1						
SGS Thomson		1						
Saturn of Tempe		1						
Simula Technologies		1						
TimeMax		1						
TOTAL 50-499		24						24

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Table 3 continued	Size of Business*							
Partner Name	0-49	50-499	500+	Associations	PS Education	Government	CBO	# Total
Allied Signal			1					
Arizona Public Service			1					
Boeing			1					
Costco			1					
Intel			1					
Microage			1					
Motorola			1					
Sitix of Phoenix, Inc.			1					
Talley Defense Systems, Inc.			1					
TRW Vehicle Safety Systems			1					
USA Today			1					
TOTAL 500+			11					24
TOTAL BUSINESS PARTNERS	14	24	11					70
American Institute of Architects				1				
Arizona Association of Industries				1				
Arizona Bar Association				1				
Arizona Bar Foundation				1				
Arizona Builders Alliance				1				
Arizona Consulting Engineers				1				
Arizona Council for Engineers & Science Assn.				1				
Arizona Council for Economic Conversion				1				
Desert Sages Retirees Club				1				
Experimental A/C Association				1				
Institute of Electrical & Electronic Engineers				1				
International Assn. of Administrative Professionals				1				
MATEC				1				
Mesa Chamber of Commerce				1				
Society of Automotive Engineers				1				
Society of Women Engineers				1				
The Galaxy Organization				1				
TOTAL ASSOCIATIONS				18				18
Arizona State University-Main					1			
ASU East					1			
Maricopa Community College District					1			
Chandler-Gilbert Community College					1			
Mesa Community College					1			
Gateway Community College					1			
Glendale Community College					1			
TOTAL POSTSECONDARY EDUCATION					7			7
City of Mesa						1		
City of Tempe						1		
Federal Aviation Administration						1		
Maricopa County Human Services						1		
TOTAL GOVERNMENT						4		4

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Partner Name	Size of Business*			Associations	PS Education	Government	CBO	# Total
	0-49	50-499	500+					
Building a Healthier Mesa							1	
Mesa Service Learning/Tobacco Grant							1	
Save the Family Foundation							1	
TOTAL COMMUNITY-BASED ORGANIZATIONS							3	3
TOTAL BUSINESS/OTHER PARTNERS	14	24	11	18	7	4	3	81

* Number of Employees

Goal 5: Public Awareness

Presentations to businesses, civic groups, and schools are a key aspect of the HTIC/STW public awareness efforts. By early March, 21 presentations had been made to small groups (ten to 25 individuals). The following organizations were among those targeted for recruitment: Office Depot, Fazoli's, Saturn of Tempe, Whataburger, Sonic, the Tempe Chamber of Commerce, and Tempe Elementary District Counselors. In addition, five one-on-one presentations were made to government, school, and business officials. Quarterly presentations had been made to the GSPED/HTIC/STW, which includes 50 High Tech business representatives.

Two of the HTIC/STW programs also have public awareness goals and objectives. The Roots and Wings coordinator made presentations on nine different dates to 139 teachers, 105 counselors, eight parents, and 30 general audience members. Delta staff reached approximately 75 people/organizations through its monthly meetings and 20 businesses through a presentation to the Mesa Chamber of Commerce. Delta also publishes a monthly shadowing newsletter, which is posted on its website and distributed at meetings.

Goal 6: System Evaluation

The HTIC/STW Partnership participates in the overall state evaluation plan, which incorporates both state and federal reporting responsibilities. In addition, the Partnership Director has contracted with an outside consultant to assure compliance with state evaluation requirements, which include a partnership self-evaluation plan. Self-evaluation plans for the current year are limited to examining the completion status of program/partnership goals and objectives. The advisory board and an evaluation subcommittee are looking at additional measures of success. Possible measures identified for specific programs include:

- Measuring the success of the Choices Program of the Delta Partnership with respect to the student drop out rate and/or types of electives selected by students exposed to the program.
- Measuring the success of Chip Camp through student, teacher, counselor, and/or industry representative surveys.
- Comparing a targeted Roots and Wings school (Whittier) to a control school for changes in attendance and discipline referrals.

Discussion

Partnership Assets

The HTIC/STW Partnership has a well-organized operational structure. Staff roles and responsibilities have been charted and delineated. The partnership appears to have a well-defined mission and a clear future vision.

The partnership has excelled at forging relationships between education and industry. The "Areas of Expertise" resource list and monthly Delta meetings have been helpful in developing business and school linkages. Links established through teacher/industry exchanges have translated into student opportunities. For example, the principal of the new Superstition Skyline High School in Mesa was able to develop a relationship with TRW through his exchange experience. Job shadowing by the Red Mountain High School Math Department Chairperson evolved into a field trip opportunity at Boeing for 35 accelerated math students.

The ability to tap into existing organizations with multiple volunteers (e.g., Desert Sages Retirees Club, Arizona Association of Industries, and the Society of Women Engineers,) has been partnership strength. Said one individual, "Volunteer organizations provide a more reliable and/or available pool of individuals to support goals of STW."

Although student outcomes have not yet been demonstrated for many of the programs, several programs have cited some evidence of their successes. Eleven out of 29 Chip Camp students enrolled in the fall 1998 Achieving a College Education (ACE) program at Glendale Community College in the math/science/technology track. Nine out of the 11 completed the courses and enrolled in spring 1999 ACE classes. Project Pride is being implemented in all sixth grade science classes at Altadena Middle Schools. One of the ninth grade schools is using the Project Pride curriculum in place of the existing ninth grade business program.

Partnership Challenges

Challenges faced by the HTIC/ STW Partnership this year include: [8]

- First-year implementation challenges. New schools did not always take advantage of all programmatic components/options offered by Roots and Wings (e.g., career fairs, presentation to parent groups). The Roots and Wings program staff person hypothesized that schools might have been "leery to attempt too much."
- Creating school "buy-in" or ownership of School To Work. Interviews suggested that it was a "Challenge taking schools who are in vastly different areas and whose principals and staffs had very different philosophies of education and getting them all on-board with School to Work." For Roots and Wings, "The problem may be that many of these schools' principals and faculties have yet to really understand the concept of School To Work as it applies to elementary school-aged children."
- Translation of curriculum materials into Spanish. Basic Roots and Wings forms (e.g., student education and portfolio record keeping) pages have been translated into Spanish. The partnership did not have resources to translate all curriculum materials. The State was not able to provide technical assistance to accomplish this objective either.
- Lack of site coordinators at schools. The volunteer nature of site coordinator positions in the Mesa schools contributed to implementation inconsistency of Delta at the junior and senior high school.
- Job shadowing/Student internships (first year implementation challenges). Other barriers included lack of transportation and chaperons.
- Staff turnover. Three of the targeted elementary schools for Roots and Wings had new principals. A change in counseling personnel also delayed implementation of Project Pride at Carson Junior High.
- Professional development. One of the things that the partnership learned during the year about teacher/industry exchanges was "While district support is needed to successfully implement such

[8] The HTIC/STW Partnership may have experienced additional challenges. Roots and Wings barriers were the primary ones indicated.

partnerships, it has become evident that local autonomy at the school level is required to maintain these professional development programs."

- Student projects (Project Pride). "Paperwork" and coordination of transportation were the two barriers indicated in interviews with Stapley Project Pride students.
- Keeping track of business and education partners. Because of frequent changes, it was difficult to keep the HTIC/STW Partnership's school and business rosters updated. This may be a function of the large number of schools/businesses involved and the five programmatic elements (i.e., Roots and Wings, Project Pride, the Delta Partnership, MESA, and Chip Camp).

Summary and Suggestions

In summary, the HTIC/STW Partnership has a well-established governance structure that includes GSPED industry members. The partnership examines ongoing needs through monthly advisory board meetings. The advisory board has created and approved a sustainment plan.

The partnership has coordinated activities with existing educational and/or training programs and has made some higher education linkages. Postsecondary and high school expansion plans for the current year have been surpassed. The partnership has addressed roll-out issues for ensuing years and has a draft roll-out plan. Fifteen additional schools are expected to "come on board" in the following year.

Attempts have been made to integrate HTIC/STW activities with other Maricopa STW partnerships. The extent of targeted special populations being served is unknown, other than for the Roots and Wings program. Students are participating in school-based, work-based, and connecting activities at all school levels.

Many of the identified 1998-99 partnership-level goals have been accomplished. The partnership has been able to "proliferate comprehensive programs across K-12 systems" in one comprehensive program (Delta). At least 30 additional schools are expected to "come on board" in the following year.

At the time of the site visit, the status of the other HTIC/STW comprehensive programs was "in progress." Chip Camp is due to be implemented during summer 1999 and is expected to serve at least 60 students. The MESA component was delayed because another source of funding for the summer program was received. However, while other opportunities were explored, it made the most sense for the HTIC/STW Partnership to subsidize student registrations to the summer residence camp. The contract to fund these students is being processed.

The partnership has increased the number of students exposed to career awareness and career exploration activities. In Roots and Wings last year, 200 students participated. Roots and Wings expects to serve approximately 1,400 students this coming year. In Project Pride last year, 50-60 students participated. Project Pride expects a net increase of approximately 500 students this coming year.

Partnership efforts have been made to align programmatic components with district, State, and National Standards. Educators have been trained about specific programmatic aspects of the partnership, participated in teacher/industry exchanges and internships, and attended STW-related inservices.

In addition, the HTIC/STW Partnership has attempted to engage the larger community and to create greater STW public awareness. Contracted personnel have completed (or will complete by the end of the contract year) stated connecting activities/integration and public awareness goals and objectives. The partnership has exceeded the number of business/organization partners it hoped to recruit by eight. The partnership also surpassed the targeted-number of postsecondary partners.

The partnership has complied with state and national evaluation requirements to date. The partnership has a limited self-evaluation. Plans for the upcoming year include additional refinement of the partnership's evaluation design.

Although the partnership goals and objectives have been accomplished, middle/junior high and high school roll-out goals for 1998-99 (as cited in the partnership proposal) will not be met. Some individual program partners have been challenged in satisfying their proposed goals and objectives. (See challenges above and paragraphs below).

Project Pride's first goal was "To partner the appropriate high tech business with each of the 10 targeted middle schools for long term relationships *to help expose students to career opportunities in the high tech industry*."[9] In a site visit to Stapley Junior High School, the State evaluator observed that the student service-learning project chosen did not pertain to the "high tech" industry. Certain key features of the Project Pride curriculum (e.g., *small* teams of five-nine individuals, brainstorming, use of pareto charts, presentation to a board of business people) were lacking in the project described. While community involvement in the presented project was evident, business involvement was less so. It may be that the site-visit example given was an anomaly in program implementation, rather than the Project Pride norm.

Although it is "important to understand that we are NOT career tracking young students into becoming SMT (semiconductor manufacturing technicians)," Project Pride's first stated goal pertains to career exploration which is an appropriate STW implementation focus at the middle/junior high school level. The State evaluator agrees with partnership staff who state that, "...exposing students to the current methodologies of how industries conduct business give them the fundamental essential tools for them to be successful in the 'real' world of work." Furthermore, "The projects that the students identify use these kinds of methodologies of critical thinking and problem-solving while working in teams—the very same processes used in high technology." A junior-high school curriculum that incorporates needed work-skills and involves career preparation is value-added to current curricular offerings. However, efforts to incorporate high technology into the Project Pride curriculum (e.g., current curriculum supplementation with Federal Aviation Association education modules) need to be more demonstrably visible.

The first stated objective of the program was "Each year specific high tech companies will be identified and recruited for each of the 10 targeted middle schools to establish ongoing partnerships with the schools." Evidence of accomplishment was "Each of the 10 targeted schools *will be matched with a committed business partner*." In clarifying questions posed to the partnership, it was stated that "We are working with 'Areas of Expertise'...which represent industries such as aviation engineering and manufacturing. Areas of Expertise will not necessarily be matched to only one specific school but each of our participating schools will have the opportunity of having 'exposure' and contact with a variety of these organizations in a variety of ways." The answer given helped to clear up the misperception created by the written objective that schools would be matched with individual business partners.

Project Pride's first objective also stated that, "Field trips and business partner visits to the classroom, as well as the business partners input to revise the Project Pride curriculum, are also objectives." It was difficult at the time of the site visit for the State evaluator to determine the "ongoing" status of Project Pride components (i.e., number of field trips and classroom speakers). In the self-evaluation report submitted by the HTIC/STW Partnership to the State, it is anticipated that the partnership will provide a greater level of specificity on the accomplishments of this program's goals and objectives.

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[9] The site monitor has added Italics.

The lack of specificity also is a concern on the high school level for the Delta Partnership. It is evident that Red Mountain High School and, to some extent, Westwood High School are participating in Delta activities. At the time of the site visit, it was less clear regarding the level of STW implementation at other Mesa high schools.

Suggestions for consideration by the partnership include:

- Incentives for site coordinators and coordinators at each school site might provide a consistency of program implementation at the junior high school and high school level.
- Junior High School level
  - The STW career exploration aspect of the partnership needs to be strengthened. As it currently stands, Choices (Delta Partnership) only exposes students in two-hour time blocks. Additional career exploration activities might be incorporated into the Project Pride program.
  - Project Pride goals and objectives could be clarified.
  - Administrators from Project Pride schools should be thoroughly briefed about the program.
- The partnership should expand intern opportunities for students and identify other work-based experiences available to students (e.g., apprenticeship, job shadowing).
- Professional development opportunities might include a partnership-wide "kick-off" STW orientation for administrators, counselors, business partners, and other individuals not readily buying into the concept of STW. This would be particularly important for junior high principals, who have influence over the direction of Project Pride student campus improvement projects.
- The partnership needs to formulate a more definitive evaluation plan that includes programmatic evidence of success. Program pieces that have not yet been implemented this year (i.e., MESA and Chip Camp) should also be evaluated in the context of how they "fit" into the partnership and their cost-benefit (number of students served and results compared to program costs).
- The HTIC/STW Partnership should provide the State with monthly updates if there are substantial changes to business and school rosters.

Software Cluster STW Partnership

Site Visit: March 24, 1999[1]

Region Served: Maricopa County

FY 1998-99 funding: $168,681
GSPED Cluster: Software

School Profile

The Maricopa Software School To Work (STW) Partnership directly serves students in five school districts (three unified, one elementary, and one high school). In addition, students from the East Valley Institute of Technology (EVIT) are participating in partnership activities. The Software Cluster STW Partnership includes schools enrolling almost 33,000 students in grades pre-kindergarten through 12 in 1998-99 (as shown in Table 1).

Table 1*
Total Student Enrollment for the Software Cluster STW Partnership (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)
Grades Pre-K through 6	678
Grades 7 through 8	1,376
Grades 9 through 12	30,719
Ungraded Elementary (K-8)	0
Ungraded Secondary (9-12)	17
TOTAL	32,790

*Enrollment data reflect 18 schools for which data were available of the 19 identified in the partnership

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

The Maricopa Software Cluster STW Partnership has 17 business partners (13 large businesses and four small businesses). The Arizona Software Association (a trade association) and Mesa Community College's Business and Industry Institute also are partners.

Goal 1: System Governance and Partnership Development:

Partnership Governance and Staff

[1] Observations are based upon:
- Initial intake and level of involvement information collected in fall of 1998;
- Interview on March 24, 1999, with Pinny Sheoran Software (STW Partnership Director) and Susan Schmidt (Administrative Assistant); and
- School site visits to Red Mountain High School and Royal Palm Middle School on March 9, 1999.
- Observation/brief interviews at the ASA Workforce Development Forum held March 11, 1999.

The Software Cluster STW Partnership has a 15-member advisory board that meets monthly. Two districts/schools, nine businesses, two community-based organizations, one postsecondary institution, and one parent serve as representatives to the board. Board members are mostly senior managers. Membership has been stable during the first year of partnership implementation.[2]

The role of the advisory board is to develop a conceptual framework for the partnership, both strategic (STW activities) and tactical (workforce development). Advisory board responsibilities include partner recruitment, planning, monitoring, oversight and assisting in the coordination of job shadowing experiences for students and teachers. As part of this effort, the program committee of the board developed a recruitment video, a guest speaker list, and a job shadowing kit to guide students, teachers, and business hosts in optimizing work-based experiences. Additional board committees (compliance, program development, and evaluation) meet on a monthly basis.[3]

Although schools do not have "site coordinators" per se, each district has designated staff responsible for implementation of STW activities. Royal Palm Middle School has a campus representative/partnership liaison that is paid a stipend for work beyond normal school hours and days.

The Director of Vocational Education for Mesa Public Schools serves as the Software Industry STW Partnership Director (.10 FTE position). The Partnership Director is the "single point-of-contract" for the partnership and "signs all the legal documents." Mesa Unified School District also is also the partnership's fiscal agent.

The Director of Mesa Community College's Business and Industry Institute acts as the partnership's half-time (.5 FTE) Technical Advisor and Implementation Coordinator[4]. The Technical Advisor/ Implementation Coordinator is responsible for monthly reports to the Advisory Board, mentoring/ program support to partner schools, data collection and documentation, event coordination/scheduling, and "operationalizing all of the management of the partnership." The Technical Advisor and Implementation Coordinator evaluates all partner invoices against stated goals and objectives prior to sending it to the Partnership Director for approval and the fiscal agent for payment. The Advisory Board Chair donates part of his time (.15 FTE) to partnership activities. Mesa Community College's Business and Industry Institute provides in-kind clerical and administrative support (.75 FTE).

Sustainability

The issue of sustainability has been examined at monthly board meetings, but no formal sustainment plan has been developed. The partnership hopes that professional development activities and industry certification opportunities offered through Mesa Community College's Business and Industry Institute will continue beyond the end of federal funds. The Software Cluster STW Partnership also expects to institutionalize linkages between individual business partners and school partners and to sustain the advisory board through Arizona Software Association sponsorship.

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[2] One person resigned because he was leaving the State.

[3] Two other committees originally created by the board (awareness and recruitment and sustainability) were eliminated. The board decided that "these issues were too important to delegate to subcommittees, so the board reassigned them as standing agenda items."

[4] The position is provided in-kind by Mesa Community College.

Goal 2: Program Coordination and Integration

Program Coordination and Integration

The Software Cluster STW Partnership is coordinating STW activities with existing educational and/or training programs (e.g., cooperative education and Tech Prep programs). With the exception of Washington Elementary District, which is a comprehensive program aiming at elementary and middle/junior high school students, the primary focus of the partnership is high school students. Both Mesa and Peoria School Districts have course sequences which ultimately lead to industry-recognized certification or licensing at the postsecondary level (e.g., A+ certification/computer technician, C++ programming, Visual Basic Programming, Microsoft Certified Systems Engineer, Microsoft Officer User Certification, CISCO System Networking Technician). However, as was noted by the Technical Advisor/Implementation Coordinator, "not much has been done on Career Pathways because the focus or emphasis is on the college level. This is a college-level track."

Mesa Community College's Business and Industry Institute has had a strong role in partnership development and in providing professional development opportunities to teachers from partnering districts. Mesa Community College has reportedly provided in-kind support totaling $202,527 this fiscal year. Mesa High Schools and EVIT have articulation agreements with Chandler-Gilbert Community College (CGCC). Scottsdale is working to obtain dual credit for some software classes through CGCC. Peoria has dual enrollment agreements with Glendale Community College.

Universal Access: School Participation and Roll-out Strategy

The Software Cluster STW Partnership's roll-out strategy was outlined in their original proposal. Additional districts/schools added in the spring of 1999 were Tempe Union High School District, Cave Creek Unified District, Scottsdale Unified District, and East Valley Institute of Technology. Professional development activities for teachers have been emphasized in these "new" districts.

On September 30, 1998, the Software Cluster STW Partnership had eight education partners. Original partnership roll-out plans for the 1998-99 fiscal year counted 43 schools by June 30, 1999 (12 elementary schools, 15 middle/junior high schools, 12 high schools, and 4 postsecondary institutions). By May 1999, the partnership had 19 education partners (Table 2). When schools receiving professional development for teachers are factored in[5], the partnership anticipates a total of six elementary, three middle/junior high, 20 high schools[6] and one postsecondary institution partner at the end of the fiscal year (June 1999).

Interviews suggest that the partnership will most likely expand STW activities in existing partnering districts in coming years. Direct student activities will be offered in the districts/schools in which professional development has been emphasized this year. The partnership also is considering adding two charter schools and one other unified district partner. Emphasis will be given to recruiting middle/junior high and high schools, according to the Technical Advisor/Implementation Monitor/Coordinator.

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[5] Five schools in the Cave Creek Unified District, two in Mesa Unified School District, two in Peoria Unified School District, two in Scottsdale Unified District, and one middle school (Wilson) are receiving only Jump Start professional development services for teachers this fiscal year.

[6] Includes EVIT

Integration with Other Initiatives

The Software Cluster STW Partnership has been working with the Maricopa Tourism and Experience STW Partnership to jointly arrange field trips for students. Furthermore, Mesa Community College's Business and Industry Institute leveraged a pilot lab donated by CBT Systems and $25,000 worth of software to provide computer-based training for teachers. The Information Technology Association of America (ITAA), Education Development Center (EDC), and the National Alliance of Business (NAB) awarded the Arizona Software Association (ASA) a grant to conduct a regional workforce development forum that supported STW. The Software Industry Cluster hosted an United States Department of Commerce Information Technology Workforce Shortage forum at Mesa Community College's Business and Industry Institute.

Targeted Access for Special Populations

Although the partnership does not have specific plans for including special populations (e.g., out-of-school youth), students with special characteristics are being served. Title 1 and LD students from Royal Palm Middle School participated in field trip activities. An Equity Conference (to recruit women into the information technology field) was held in April at EVIT for 65 ninth grade students from eight districts.

STW Elementary, Middle, High School, and Postsecondary Initiatives

Each school district in the partnership has distinct priorities and established goals and objectives. However, the following are examples of common STW activities implemented by the Software Cluster STW Partnership this year.

Curriculum Integration. Mesa and Peoria academic and vocational teachers have been working on the development of integration activities that emphasize math, technology, and language arts. Competencies are in the process of being modified to integrate the Software Cluster and technology into the curriculum.

Computer and Vendor/Certified Classes. Mesa students completed programming classes this year: 60 took CISCO classes; 160 participated in A+ classes; and 50 in Microsoft series classes. In Peoria, 384 students completed CISCO classes and 1,967 took programming classes. Per a clarifying question posed to the Technical Advisor/Implementation Coordinator on May 14, 1999, these numbers represent classes that were initiated this year (1998-89) directly as a result of school involvement by the Software Cluster STW Partnership.

Portfolios. The technology coordinator at Red Mountain High School indicated that all students have portfolios of some sort, but they are not necessarily electronic portfolios.

Guest speakers. Red Mountain High School had two guest speakers in the Strut class. From August 1998 through June 1999, two speakers per month from Bull Information Systems spoke to groups of 100 Ironwood Elementary students.[7] Nine guest speakers from software businesses made 12 presentations to 680 Royal Palm Middle School students during an April Career Day, while 40 Coronado High School students listened to Information Technology guest presentations during a spring Career Day.

[7] The partnership estimates that 1,000 total students will be served through the Bull guest speaker series. This represents a duplicated student count.

Field trips. Some 135 students from Royal Palm Middle School (see job shadowing below) have completed five field trips to three software businesses. A total of 125 Ironwood Elementary students will visit Bull Systems, Insight, and Syntellect in May, while 75 Mesa students will have gone on field trips.

Table 2
"Active" School Participation for the Software STW Partnership

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active Schools" (FY 1998/99)							
	E/J	M/J	J/S	K-12	Total	School Name	# Students**	E/J	M/J	J/S	K-12	# Total	% Total
						Red Mountain HS				1			
						Mesa High School				1			
						Westwood				1			
Mesa Unified	54	12	8	8	82	Mesa Unified	602			3		3	4
						Cactus HS				1			
						Centennial HS				1			
						Ironwood HS				1			
						Peoria HS				1			
						Sunrise Mountain HS				1			
Peoria Unified	24		6	2	3 2	Peoria Unified	2,362			5		5	16
						Coronado				1			
Scottsdale Unified	19	6	5		30	Scottsdale Unified	41			1		1	3
						Compadre				1			
						Corona del Sol				1			
						Desert Vista				1			
						Marcos de Niza				1			
						McClintock				1			
						Mountain Pointe				1			
						Tempe Union HS				1			
Tempe UHSD			8		8	Tempe UHSD	49			7		7	88
						Ironwood EL	325	1					
						Royal Palm MS	680		1				
Washington ESD	29	4			33	Washington ESD	1,005	1	1			2	6
Other						EVIT	85			1		1	
Charter						Charter Schools							
Total Public Schools	126	22	27	10	185	**Total Public Schools**	4,144	1	1	17		19	10
Private Schools													
Department of Youth Treatment													
TOTAL SCHOOLS						**TOTAL SCHOOLS**							
Number of Students**						Number of Students**	4,144						

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

** This table reflects unduplicated counts of students served (May 1999). Students may have participated in multiple STW experiences. It does not reflect students served indirectly in those districts in which teachers received professional development in 1998/99.

Student internship and job shadowing opportunities. By May of 1999, 134 high school students (11 from Peoria District, 53 from Mesa, 20 from EVIT, 49 from Tempe, and one from Scottsdale) had job shadowed in software-related businesses. Some 135 eighth grade students from Royal Palm Middle School participated in combined field trip/job shadowing experiences. Participating businesses included: Cisco Systems, Eric Archer Consulting, Bull HN Information Systems, Maricopa Co. United Blood Services, Netpro, Modern Industries, Motorola, Merex, MicroAge, Insight, Phoenix Hilton Suites, and Mesa Community College Main Campus. Seven Red Mountain High School Students were placed in

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software-related internships. In addition, four Red Mountain students helped to set-up computer labs at both the school and at Powell Junior High School.

Mentoring. Sixty-five high school students participated in interactive career exploration activities at the EVIT Equity Conference with 15 Mesa Community College and 12 business mentors.

Vocational Student Organizations. Two students from Red Mountain High School were state winners in the A+ certification test. One of these students placed third in the nation in the A+ competition.

Goal 3: Technical Assistance

Ongoing Needs Assessment

The advisory board determines ongoing partnership needs.

Curriculum/Assessment Initiatives (Including Career Pathways, *K-12 Workplace Skills*, Applied/contextual curriculum)

Curriculum integration is being explored by several school districts, notably Mesa and Peoria. Teachers are being exposed to industry-certified curriculum.

Professional Development Initiatives (Including business and educators)

The Software Cluster STW Partnership has placed a primary emphasis this year on professional development for teachers. One of the reasons that professional development has been stressed so heavily is that industry certification is required for high school teachers in order to prepare students for information technology careers. The partnership has several approaches to teacher training, which include:

Teacher internships. Summer internships are planned for 15 Mesa teachers, five Peoria teachers, and the Washington ESD facilitator. A list of industries that might want to work with the teachers already has been contacted (e.g., high tech automotive industries and architectural firms). As of May 1999, it was unknown if the Mesa internships would occur.

Teacher exchange days. Six teachers from Royal Palm Middle School and six from Peoria High Schools had job shadowing opportunities during the second semester of 1999.

Jump Start Professional Development Institutes. As part of the subcontract with the Software Cluster STW Partnership, Mesa Community College Business and Industry Institute agreed to provide professional development, certification and training opportunities for 30 teachers. The training is technical in nature, is delivered in an accelerated format, and is designed to prepare teachers to teach networking, programming, and Internet design.

Jump Start I. Jump Start I enables teachers to complete pre-requisites needed for certification. After a 4-hour, on-site orientation on STW, teachers use computer-based training to work independently towards completion of course requirements. Tests are monitored, with rotating staff moving to school sites as needed. Final exams are given at the Business and Industry Institute. Some of the industry-recognized certification courses offered for college credit include: Office User Specialist, first level of Microsoft

networking, first semester of CISCO training, and object-oriented programming (e.g., Visual Basic, C++, Java).[8]

The Business and Industry Institute was able to enroll 188 teachers (68 from Peoria, 34 from Mesa, 68 from Cave Creek, and 18 from EVIT) in Jump Start I. Some 96 teachers were close to completion of course requirements (May 1999). The Software Cluster STW Partnership estimates that "A total of 3,083 students have been served through the CBT teacher development activities."

Eighteen teachers are enrolled in three one-week "train the trainer workshops," planned for the summer of 1999. Jump Start II will build on pre-certification skills learned in the first session and focus on curriculum integration opportunities on the high school level. Teachers completing these workshops are eligible for Microsoft Certified teacher status.

Goal 4: Community Involvement
(Including employers and the community-at-large)

On September 30, 1998, the Software Cluster STW Partnership had eight business/other partners. Per the 1998-99 proposal, the Software Cluster STW Partnership expected to have a total of 13 business partners by the end of the contract cycle. By May 1999, the partnership had 17 business partners, one trade association, and one postsecondary education partner (See Table 3).

The Partnership attempted to increase business involvement via development of a speaker's kit, a job shadow kit, and a job-shadow recruitment video. A list of speakers available for presentations at school was compiled. Other Community involvement activities included:

Network nights. The public was invited to forums in which information technology certification pathway opportunities were discussed. Seven network nights (including one scheduled for June) were/will be held at Mesa Community College's Business and Industry Institute. Some 196 parents, students, and educators attended the Network Nights held from November through April.

Technology nights/fairs. Technology nights/fairs are outreach and marketing events focused on technology. Red Mountain High School planned a technology night, but it did not happen.

Technically Focused industry/public awareness events. Mesa Community College's Business and Industry planned and hosted the following events:

- The Software Cluster hosted a United States Department of Commerce Information Technology Workforce Shortage Forum in December— a total of 174 teachers, business leaders, librarians, and legislators attended.
- In March, the Arizona Software Association hosted a Workforce Development Forum, "Developing the Silicon Desert." The Software Cluster STW Partnership was featured in a poster board display, brochures, and two afternoon breakout sessions, which emphasized STW school/business connections.
- The Mesa Community College Center for Public Policy Services (CPPS) is working with the MCC to plan a June event.

[8] Object-oriented programming is a skills set of tools used for development of the Internet

Table 3
Active Business/Other Partners for the Software Cluster STW Partnership (FY 1998-99)

Partner Name	Size of Business*			Associations	PS Education	# Total
	0-49	50-499	500+			
AWM Associates	1					
IKON solutions	1					
Merex	1					
MGT Associates	1					
Total 0-49	4					4
Bull HN Information Systems			1			
Cisco Systems			1			
Country Inn & Suites			1			
Insight			1			
MCI World Communications			1			
MicroAge			1			
Microsoft			1			
Modern Industries			1			
Motorola			1			
Netpro			1			
Phoenix Hilton Suites			1			
Syntellect, Inc.			1			
United Blood Systems			1			
Total 500+			13			13
TOTAL BUSINESS PARTNERS	4	0	13			17
Arizona Software Association				1		
TOTAL ASSOCIATIONS				1		1
Mesa Community College					1	
Business and Industry Institute						
TOTAL POSTSECONDARY EDUCATION					1	1
TOTAL BUSINESS/OTHER PARTNERS	4	0	13	1	1	19

* Number of Employees

Goal 5: Public Awareness

Network nights and workforce development forums have been used as platforms to raise public awareness of the Software Cluster STW Partnership. The Arizona Software Association also publicizes STW at its meetings. The partnership used radio (KBAQ, KJAZZ) public service announcements, promotional flyers and letters to publicize STW activities. A website linked to the ASA website is being planned. An article about the Software Cluster STW Partnership was published in *Education West*, "a Magazine Serving Over 20,000 Top Educators in 14 Western States." An article about the April Equity Conference was published in "Arizona Women's Forum Magazine."

Goal 6: System Evaluation

The Software Cluster STW Partnership participates in the overall state evaluation plan, which incorporates both state and federal reporting responsibilities. A subcommittee of the advisory board has developed a survey to assess the impact of STW activities upon student and teacher awareness of the software industry/cluster. School partners collect data at the end of each activity. At year-end, the partnership will determine whether schools have met their stated goals and objectives.

Discussion

Partnership Assets

The Software Cluster STW Partnership has been able to recruit large companies with the potential of numerous job opportunities for students. Individuals serving on the advisory board are management-level decisionmakers, who are able to marshal and commit resources. Linkage with an established institution such as the MCC Business and Industry Institute also has been a powerful tool in business recruitment. Knowledge that MCC provides current workers to meet industry short-term needs has allowed MCC to use its reputation and influence on businesses to leverage opportunities for high school students.

The Software Cluster STW Partnership has been successful in leveraging resources. Examples include the CBT Systems lab and software pilot moneys and the grant provided by the Information Technology Association of America.

According to one of the education partners, the primary benefit of association with the partnership has been teacher training. The schools recognize that teacher training is a first step toward implementing a technical software curriculum. Said one middle school teacher who had participated in job shadowing, "As a teacher, it gave me a better understanding of how business and industry operate. It was a very valuable experience. It gave me three to four months' worth of lessons." The perception of those interviewed was that students had benefitted indirectly through professional development opportunities for their teachers.

Another partnership asset was the creation of a uniform structure for student work-based experiences. The development of speaker's kits, job shadow kits, and field trip kits by the partnership allowed consistency of experience from school to school and business to business. They also gave students, teachers, and businesses a better understanding of expectations and participation requirements. Finally, the kits were a stable means for the partnership to evaluate student experiences.

Partnership Challenges

The Software Cluster STW Partnership has faced numerous challenges this year. The following is a list of obstacles encountered:

- Infancy of the software cluster. Software is an emerging cluster in Arizona. As the Technical Monitor/Implementation Coordinator said "We are new to the process. We are just getting our feet wet." As one of the business partners pointed out, "Software is service. It is technology embedded within other clusters—tourism, health, high tech manufacturing. In some sense, it is a foundation." The relative "newness" of the field complicates integration of software curriculum into schools.
- Representative recruitment of business partners. The partnership has the challenge of recruiting businesses that are not members of the Arizona Software Association (ASA).
- Role confusion at the education partner level. At the time of the site visit, education partners were having difficulties in accomplishing stated goals and objectives. The Technical Monitor/

Implementation Coordinator said that the schools had expected the Partnership to provide technical assistance in accomplishing the objectives (e.g., to actually arrange the field trips). In her perception, the initiative needed to come from the schools or businesses as opposed to a central partnership office.

Furthermore, certain schools had been paired with single business partners. If the business partner failed to participate fully in providing promised activities, the school partner was unable to accomplish desired objectives.

It appears that the responsibility for monitoring/oversight of the accomplishment of education partner goal/objectives was not clearly delineated. Although some of the education partners had identified staff to "coordinate" STW activity implementation, the level of "technical assistance" (on either the partnership or business-level) necessary to ensure activities occurred was not outlined.

- Communication problems with the State. Some of the individuals interviewed felt that state directives had been confusing and, in some cases, conflicting.
- "Paperwork" problems. The amount of paperwork required by the State is perceived to be onerous. Concern was expressed over the time gap between the time a service was rendered/activity took place and reimbursement.
- Teacher experience. Implementation of software industry-related curriculum in the schools is complicated by the lack of teacher certification/experience. Without vendor certification, high school teachers are challenged in delivering curriculum. Schools might be able to offer curriculum but not have teachers with the body of knowledge to deliver it. Complicating the "teacher experience" issue is variability in vendor certification requirements.
- Business lack of understanding of STW. Some of the business partners were confused as to appropriate uses of STW moneys.
- Creating school "buy-in" or ownership of School To Work. One of the schools indicated that, though they had presented STW opportunities at weekly steering committee meetings, "The teachers were not interested."
- Technical Subject Matter. The Software Cluster STW Partnership planned to use the services of the Mesa Center for Public Policy Services (CPPS) to "conduct public events, community round tables, community development activities, and service learning to induce additional business participation." The Mesa Community College Business and Industry Institute took the lead in conducting these activities, due to the technical nature of the subject matter being presented. The partnership anticipates that the contractual obligations made by Mesa Community College will be fulfilled.
- Field trips. Transportation problems, changing of field trip dates by businesses, and lack of substitute teachers made field trip scheduling problematic. In Mesa, retired volunteers were recruited to substitute in classrooms.
- Student attendance at Network Nights. It is difficult to quantify the number of students attending network nights. Of the high school students that have gone, transportation problems and timing (e.g., the meetings were held at night) were cited as problems. School partners plan to have students obtain "extra credit" for attendance at these events next year.
- Availability of computer equipment and software. Royal Palm Middle School had only one computer linked with the Internet.
- Internships. According to one teacher interviewed, "Students are eager to intern. Business people are so time pressed that they don't get back to the students." Another problem encountered is that businesses want people who are certified, "not high school kids."
- Postsecondary participation. Because the focus of the information technology track is at the two and four-year level postsecondary level, getting two and four year institutions to "step up to the plate" has been a challenge.

Summary and Suggestions

In summary, the Software Cluster STW Partnership has accomplished some of the targeted State and Partnership goals. The partnership has an established governance structure, which meets regularly. The advisory board is comprised of at least 50% business membership. Business partner recruitment goals for the year have been exceeded. The issue of sustainability has been discussed informally.

The Partnership appears to have some staffing challenges. It seems that the Partnership Director is "director" in name only. The Partnership Director functions solely in a fiscal agent capacity. Operational management of the partnership in actuality rests with the Technical Monitor/Implementation Coordinator. Having to process invoices first through the Technical Monitor/Implementation Coordinator, then the Partnership Director, then the Fiscal Agent, and then the State contributes to reimbursement delays. While the Partnership Director has the legal "teeth" to deny payment to subcontractors failing to fulfill contractual obligations, no penalties are imposed if they do not meet their stated tasks and deadlines. One means of at least "keeping tabs" on the education partners would have been the Faculty and Student Coordinator, a position that was eliminated to provide additional professional development opportunities to teachers from partnering schools.

The Technical Monitor/Implementation Coordinator for the Partnership has numerous responsibilities. In addition to fulfilling assigned responsibilities of the Faculty and Student Coordinator, she serves as Executive Director of Mesa Community College's Business and Industry Institute. MCC had originally pledged support for a separate evaluation (.10 FTE) and community involvement (.10 FTE) functions. The Technical Monitor/Implementation Coordinator also had assumed these responsibilities. Although M.C. provided clerical and administrative support (.75 FT), the position was plagued by three staff turnovers. However, secretarial assistance from the Business and Industry Institute has helped to mitigate the three administrative staff changes that occurred during the current contractual period.

The partnership coordinates activities with some existing educational and/or training programs and has strong linkages with Mesa Community College. Attempts have been made to integrate software STW activities with other initiatives or partnerships. Some efforts are being made to serve targeted populations.

The number of schools with students receiving direct STW services is low (19), compared to anticipated partnership school growth (45 schools). If schools receiving professional development for teachers are included, the partnership has surpassed recruitment goals only on the high school level (20 versus a projected 12 high schools). School and business partners targeted for next year have been quantified.

The Software Cluster STW Partnership's has recruited businesses for student and teacher internships and business tours (Partnership Goal 4). Students have participated in field trips, job shadowing experiences, and internships. Some teachers will intern with companies in the summer of this year and have job shadowed in software-related businesses.

Although business and education connections have been made (Partnership Goal 3), service learning volunteerism has been limited to the 15 M.C. students participating in the EVIT Equity Conference. Students and teachers have been enrolled in vendor-certified courses. Dual enrollment agreements have been completed between some schools and community colleges.

Reportedly, approximately 4,100 students have participated in direct software-related STW services. This represents 95% of the 4,320 students that the partnership originally said they would serve.

The Software Cluster STW Partnership's first stated goal was to "Inform and educate parents, students and educators of software industry requirements for skilled workforce, and learning pathways for successful employment in software based IT activities." Network nights, ASA Meetings, Software Advisory Board Meetings, and Forums have been held as planned. However, it is unknown how many parents, students, and educators have actually been served through these activities, as participant breakdown lists are unavailable. A $125 attendance fee at one of the partnership's workforce development forums might have deterred attendance from the general public-at-large.

The second partnership goal was to "Foster development of Industry-driven skills standards, curricula, and learning paths preparing students for industry certifications and high school to college transitions." Objective 3 was to "Facilitate development of Outcomes assessment and evaluation models at partner schools." The M.C. Office of Research and Planning and Research and Evaluation interns and specialists were originally to be responsible for ensuring that this objective was accomplished. As was mentioned previously, evaluation support was withdrawn. The evaluation subcommittee of the advisory board has been challenged with this task. Although the Software Cluster STW Partnership has complied with state and national evaluation requirements, submissions have not always met stated deadlines.

Peoria and Mesa School Districts most likely will meet most of their goals and objectives. However, the Technical Advisor/Implementation Coordinator cited that obtaining data to verify that activities had occurred had been difficult.

Washington Elementary District, on the other hand, has been challenged in satisfying some of their subcontracted and stated program goals and objectives. It is unlikely that Washington Elementary District will:

- create "electronic portfolios which demonstrate knowledge of careers";
- conduct "Internet searches to discover more about employment in the Software cluster"; (Although Ironwood Elementary is "hooked up to the Internet," Royal Palm had set this objective for itself.)
- establish a mentoring program using e-mail mentors;
- "implement a curriculum that will give student hands on experience in the software cluster" (*e.g.* using programs involving computer-aided design, computer-aided manufacturing, and robotics); and
- enroll teachers in Arizona Science Center training.

Additional suggestions for consideration by the partnership include:

- Increase the diversity of the advisory board to reach and incorporate software businesses that are not ASA members. Potential strategies might include:
  - More public awareness efforts (e.g., press releases, articles in industry trade papers)
  - Re-evaluation of the effectiveness of large-scale forums/special events. While the intent is to reach mass audiences, a platform smaller in scale and abbreviated in time commitment (*e.g.*, business lunches) might attract greater business participation.
- Invite education partners to serve on the advisory board. Not only would inclusion contribute to a shared sense of vision, but allow the partnership to monitor progress in meeting identified partner goals and objectives.
- Partnership roles and responsibilities need to be refined. The Software Cluster STW Partnership should establish an accountability chain and determine what partnership-level of technical assistance and monitoring is appropriate. Among changes that might be considered are:
  - Create a Partnership Director position that is responsible for partnership operations as well as legal duties, to streamline the reimbursement process.

- Provide additional administrative support to the Technical Monitor/Implementation Coordinator to assist in the fulfillment of duties.
- Engage in partnership team-building exercises to create a common partnership vision, rather than focusing on individual education or business partner agendas.
- Outline the roles and responsibilities of staff members, education, and business partners in the accomplishment of goals and objectives.

- The Software Cluster STW Partnership should address partnership expansion and sustainment in a more formal manner.
- Mesa Community College's Business and Industry Institute and other Maricopa STW partnerships could be used to network and leverage postsecondary connections.
- Continued dialog with the State, attendance at monthly Maricopa Partnership meetings, and one-on-one contacts between the Partnership Director/appropriate state personnel will help to facilitate communication.
- The Software Cluster STW Partnership needs to strengthen the career awareness and career exploration aspects of the partnership. Strategies to accomplish this might include:
  - Focus education partners recruitment efforts on elementary and junior high schools within participating districts to create a longer-term vision of STW.
  - For teachers at the elementary and junior high school level, teacher exchanges and job shadowing might be more valuable professional development experiences than vendor certification training in helping to integrate software career awareness and exploration into curriculum.
- The partnership needs to provide a greater level of detail about the school-based, work-based, and connecting activities provided for students.
- Partner goals and objectives should be re-examined in light of what are actually "do-able," given current staffing and equipment levels. Goals and objectives should reflect a concrete vision and plan, rather than a "wish list."
- The partnership might consider having a "kick-off" STW orientation for administrators, counselors, business partners, and other individuals not readily buying into the concept of STW.
  - The partnership should make more localized efforts to inform and engage parents and students.
  - Plan in advance and schedule Network and Technology nights at rotating school sites.
  - Piggyback Technology or Network Nights onto other events (*e.g.*, Career fairs)
  - Include hands-on presentations in Technology or Network Nights to attract/engage student audiences.
  - Create consistent means of publicizing events rather than merely relying on schools to "spread the word" (see refinement of roles and responsibilities).
  - Identify potential barriers to attendance at partnership events (e.g., lack of baby-sitters for parents, lack of transportation).

Tourism and Experience STW Partnership

Site Visit: February 24, 1999[1]

Region Served: Maricopa County

FY 1998-99 funding: $292,410
GSPED Cluster: Tourism and Experience

School Profile

The Maricopa County Tourism and Experience School To Work (STW) Partnership serves students in nine school districts (six unified, one elementary and two high school). A total of thirty-six schools are education partners. The Tourism and Experience Partnership includes schools enrolling more than 56,000 students in grades pre-kindergarten through 12 in 1998/99 (as shown in Table 1.)

Table 1*
Total Student Enrollment for the Tourism and Experience STW Partnership (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)**
Grades Pre-K through 6	4,155
Grades 7 through 8	8,219
Grades 9 through 12	44,241
Ungraded Elementary (K-8)	18
Ungraded Secondary (9-12)	17
TOTAL	56,650

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

As of May 1999, the Maricopa County Tourism and Experience STW Partnership has 68 business/other partners (51 business, 3 postsecondary education, 5 government, 4 associations, and 7 miscellaneous). Twenty percent of the business partners employ less than 50 employees. Forty-three percent employ between 50 and 499 employees. Thirty-seven percent are large firms (500 or more employees). Thirteen of the business partners are in the restaurant business. Twenty-seven are hotels or resorts. Eleven are related in some way to the hospitality industry (*e.g.*, convention bureaus or newspapers). Four business partners are large state or valley-wide associations (The Arizona Hotel & Motel Association, the Arizona Restaurant Association, the Arizona Tourism Alliance, and the Valley Hotel and Resort Association).

[1] Observations are based upon:
- Initial intake and level of involvement information collected in fall of 1998;
- Interview with the Tourism and Experience STW Partnership Director Joanne Hagmann on 2/24/
- Telephone interview with Bev Brinkman, evaluator (3/31/99); and
- School site visits to Mesquite High School (March 2, 1999) and Saguaro High School (March 29,1999).

Goal 1: System Governance and Partnership Development:

Partnership Governance and Staff

The Maricopa County Tourism and Experience Partnership (MCTEP) has a fifty member Advisory Board. Nine districts/schools, twenty-two businesses, six association members[2], three post-secondary institutions, eight government representatives[3], and one parent serve two-year terms on the Advisory Board. There are two co-chairpersons (one from a school district, one a community partner). The Partnership Director also serves on the board.

The role of the Advisory Board is strategy, direction, and support. The Advisory Board meets three times yearly. Subcommittees for evaluation, finance, marketing, and education have been formed. The evaluation committee has met four times.[4] The finance committee has met monthly. The marketing committee has met five times. The education committee has met twice. The marketing and education committees also worked together on Groundhog Job Shadow Day.

In addition, the partnership has a nine member Executive Board that meets monthly. The Partnership Director, fiscal agent, financial manager, advisory board co-chairs, marketing coordinator, public awareness coordinator, State Department of Education member, and Advisory Board Vice-President serve on this board. The Executive Board is responsible for short-term operational issues as well as long-range policy planning.

Although schools do not have "site coordinators" per se, each school district has an administrator responsible for ensuring implementation of one or both of the programmatic emphases of the partnership (the Lodging Operations Program and the ProStart program). In addition, Tempe Union High School District has designated an individual to coordinate placement of Tempe High School's marketing students who are interested in job shadowing.

The Maricopa County Tourism and Experience Partnership has a full-time Partnership Director and a part-time (.20 FTE) evaluator. A contracted marketing coordinator is responsible for marketing the partnership, recruiting and training industry mentors, arranging field trips and guest speakers, promoting articulation agreements with institutions of higher learning, professional development activities, and identifying scholarship opportunities. A contracted public awareness coordinator is responsible for writing press releases, establishing media contact, recruiting industry members, arranging field trips and guest speakers and lodging industry internships and job shadowing opportunities. The Arizona Restaurant Association Foundation serves as the partnership's fiscal agent.

Sustainability

One of the partnership's objectives is, "to ensure that the MCTEP STW Project is financially self-sufficient by June 30, 2001." In addition to the finance committee's work on this issue, the Advisory Board and Executive Board have been attempting to determine how the partnership should be sustained. One option being explored is the creation of separate 501(c) 3 foundations for restaurant and hospitality partnership components. Another is to create an entirely new organization through private funding sources. Both the

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[2] The Arizona Restaurant Association (ARA) and Arizona Hotel and Motel Association (AHMA) each have more than one representative on the board.

[3] Four representatives are from the Arizona Department of Education. Four others represent other government entities.

[4] The number of meetings indicated is as of February 24, 1999.

Arizona Restaurant Association and the Arizona Hotel and Motel Association have statewide educational advisory boards committed to ensuring that the partnership endures.

Goal 2: Program Coordination and Integration

Program Coordination and Integration

The Tourism and Experience Partnership is coordinating STW activities with existing educational and/or training programs. Partner school districts have strong vocational education (HERO), cooperative education, and tech prep linkages. Effective vocational student associations (*i.e.*, FHA/HERO, DECA & Culinary Arts Clubs) exist in 14 of the secondary schools.

The integration of the Arizona Department of Education's Career Pathways is varied. Fall level of involvement data indicate that, in 17 of the 21 high schools, some activities are organized around Career Pathways. However, 63% of the middle/junior high school respondents say they are either not familiar with Career Pathways or that activities are not organized around Career Pathways.

Higher education linkages are made on a district-by-district basis. Scottsdale high school students in hospitality courses receive dual credit from Scottsdale Community College(SCC). Northern Arizona University (NAU) and SCC have made scholarship opportunities available for Scottsdale's hospitality students. Other districts have been pursuing articulation agreements with various community colleges (*e.g.*, Gilbert's hospitality and culinary arts courses with Central Arizona College).

Universal Access:
School Participation and Rollout Strategy

On September 30, 1998, the Maricopa Tourism and Experience STW Partnership had 34 K-12 education partners. By the end of June 1999, the partnership had expected to have 7 elementary, 12 middle/junior high and 17 high schools. As of May, 1999 (Table 2), the partnership had 6 elementary, 9 middle/junior high[5], and 21 high school partners. Fourteen percent of the public schools in partnering districts were "active" in the Tourism and Experience STW partnership. Almost 5,000 students had participated in tourism and experience STW activities.

Table 2
"Active" School Participation for the Tourism and Experience STW Partnership

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active Schools" (FY 1998/99)							
	E/J	M/J	J/S	K-12	Total	School Name	# Students**	E/J	M/J	J/S	K-12	# Total	% Total
						Bogle JH	24		1				
						Chandler HS	24			1			
						Hamilton HS	24			1			
						Weinberg EL	24	1					
Chandler Unified	16	3	2	2	23	Chandler Unified	96	1	1	2		4	17
						Mountain Ridge HS	42			1			
Deer Valley Unified	19	2	3		24	Deer Valley Unified	42			1		1	4
						Gilbert JH			1				

[5] V. H. Lassen had been incorrectly classified as a middle/junior high school. It is an elementary school, although STW activities are targeted at 7th and 8th grade students.

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Table 2 continued

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active Schools" (FY 1998/99)							
	E/J	M/J	J/S	K-12	Total	School Name	# Students**	E/J	M/J	J/S	K-12	# Total	% Total
						Gilbert HS				1			
						Greenfield JH			1				
						Highland JH			1				
						Highland HS				1			
						Islands EL		1					
						Mesquite EL		1					
						Mesquite JH			1				
						Mesquite HS				1			
						Superstition Springs EL		1					
Gilbert Unified	4	16	5		25	Gilbert Unified	2,500	3	4	3		10	40
						Moon Valley HS	75			1			
						Thunderbird HS	25			1			
Glendale HSD			11	1	12	Glendale HSD	100			2		2	17
						Carson JH			1				
						Fremont JH			1				
						Mesa JH			1				
						Mesa HS				1			
						Red Mountain HS				1			
						Westwood HS				1			
Mesa Unified	54	12	8	8	82	Mesa Unified	300		3	3		6	7
						Cactus HS	185			1			
						Centennial HS	327			1			
						Peoria HS	263			1			
						Sunrise Mountain HS	80			1			
Peoria Unified	24		6	2	3 2	Peoria Unified	835			4		4	13
						Lassen MS	40	1				1	5
Roosevelt ESD	18			1	19	Roosevelt ESD	40	1					
						Desert Mountain HS				1			
						Kiva EL		1					
						Mohave MS			1				
						Saguaro HS				1			
Scottsdale Unified	19	6	5		30	Scottsdale Unified	225	1	1	2		4	13
						Marcos de Niza HS				1			
						McClintock HS				1			
						Mountain Pointe HS				1			
						Tempe HS				1			
Tempe UHSD			8		8	Tempe UHSD	650			4		4	50
Charter													
Total Public Schools	154	39	48	14	255	**Total Public Schools**	4,788	8	9	22	0	36	14
Private Schools													
Department of Youth Treatment													
TOTAL SCHOOLS						**TOTAL SCHOOLS**							
Number of Students**							4,788						

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

** This table reflects unduplicated counts of students served (May 1999). Students may have participated in multiple STW experiences. Numbers represent estimates rather than final student counts.

No formal rollout strategy has been established for ensuing years. Interviews suggest that the partnership will expand STW Tourism and Experience activities in existing partnering districts. For example, the Maricopa County Tourism and Experience Partnership hopes to include additional district schools (*e.g.*, Ironwood High School in Peoria) into the fold. For districts that have implemented year 1 of either the

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Lodging Operations Program or ProStart curriculum, a second year will be added.[6] For schools with a single curricular focus, the partnership hopes to implement the second programmatic emphasis. The partnership also plans to incorporate additional aspects of the hospitality industry (*e.g.*, travel-related careers) into current curriculum. Long-term rollout strategies include strengthening vocational student organizations (by May 2000).

Integration with Other Initiatives

The Maricopa County Tourism and Experience Partnership has made efforts to coordinate student STW experiences with other Maricopa partnerships. It has worked with the Software STW Partnership to jointly arrange job shadowing opportunities for students. The Arts and Humanities STW Partnership has provided information on arts exhibits/performances for use by Tourism and Experience business partners. Agriculture students from the Agri-nomics STW Partnership have spoken to culinary arts classes about using hydroponics to grow herbs. The Maricopa County Tourism and Experience Partnership is also collaborating with the Delta Program and Roots and Wings programs (High Technology Industry Cluster STW Partnership).

Targeted Access for Special Populations

Although the partnership does not have specific plans for including special populations (*e.g.*, out of school youth), students with special characteristics are being served. For example, the culinary arts room at Mesquite High School has a kitchen arranged for physically challenged students. Students from Mesquite are working with a class of emotionally-disturbed 1st through 6th grade students from Islands Elementary. Four of the students in the Scottsdale hospitality class are "learning-ready challenged" students. Five special education students from Mountain Pointe High School are working at The Pointe Hilton at South Mountain.

STW Elementary, Middle, High School, and Postsecondary Initiatives

Each of the school partners has distinct STW implementation priorities. Chandler, Gilbert, Mesa, and Scottsdale Unified Districts focus on multiple educational levels (elementary, middle/junior high, and high school). V. H. Lassen (in the Roosevelt District) targets 7th and 8th grade students. Deer Valley, Peoria, Glendale Union and Tempe Union High School Districts aim at 9th through 12th grade students. Within this context, overall partnership goals and objectives have been developed, as well as program partner goals and objectives. The following summarizes the Maricopa County Tourism and Experience Partnership's targeted STW implementation areas.

Curriculum integration into vocational classes (Lodging Operations Program and ProStart curricula, new hospitality/tourism and culinary arts classes). Moon Valley, Thunderbird, Mountain Pointe, Mountain Ridge, Saguaro, Desert Mountain, and Westwood High Schools are integrating the Lodging Operations Program into existing hospitality and HERO/COE classes this year. ProStart is being integrated into existing food production/culinary arts programs at Chandler, Hamilton, Gilbert, Highland, Mesquite, Red Mountain, Moon Valley, Peoria, Cactus, and Centennial High Schools. Chandler and Moon Valley High Schools will implement new hospitality and tourism classes next year. In the Peoria District, the Lodging Operations Program is at the development stage.

Curriculum integration with academic classes. Computer classes at V. H. Lassen School make menus for the student-run bakery. Culinary Arts classes at Mesquite High school coordinate poultry and egg

[6] The Lodging Operations Program is being revised slightly. The revised version will be implemented.

thematic units with Agriculture classes. 72 students from Mesquite High School social studies, science, and culinary arts classes are being exposed to French food, food terms, and crops through a "French-speaking Countries" unit. Moon Valley High School has brought the Culinary Arts and Advanced Photography classes together to develop marketing materials and menus, as well as shoot still photographs & explore food styling as a career path.

Public speaking skills. Desert Mountain and Saguaro students are taught public speaking and interviewing techniques. Kiva Elementary students will receive similar instruction from high school hospitality students in the spring of 1999.

Career portfolios. High school students taking hospitality classes in the Scottsdale District keep a notebook/folder of all work and accomplishments. Middle and high school students in the same district will be writing personal mission statements that include career and educational goals (by May 1999).

Certificate of mastery. Approximately 26 high school students from the Scottsdale District will receive a certificate of completion and dual credit from Scottsdale Community College for satisfactorily finishing two semesters of the hospitality curriculum. Approximately 30 students from V. H. Lassen School expect to receive Maricopa County Food Handler's Cards.

Career interest inventories of Scottsdale elementary and middle school students will be administered in spring of 1999.

Student-based enterprises. Students obtain hands-on experiences by running bakery and restaurant operations (*e.g.*, Cactus Café at Cactus High School and a restaurant and bakery at V. H. Lassen School). The culinary arts class at Moon Valley High School also bakes goods to sell to students before school and at sporting events. The culinary arts class at Mesquite High School prepares and serves lunches to the faculty on a monthly basis and just started their own catering operation. The class at Red Mountain High School runs the Red Rock Café Bake Shop and prepares heat-and-serve dinners for their customers (primarily faculty & staff). Peoria High School offers special theme luncheons as they begin accumulating commercial equipment for future events.

Student internship, job shadowing, and supervised occupational experience opportunities. 332 students from 11 schools participated in Groundhog Job Shadow Day (February 2) at valley hotels and resorts. Two Tempe High School students job shadowed with Alaska Airlines in Phoenix and Seattle during a school intercession. Ten students job shadowed during the fall intercession through Tempe High School and were paid for their efforts by Tempe Youth Employment Services. Eight culinary arts students job shadowed with Motorola Food Works at the company's conference center and convinced the manager to begin accepting interns from Chandler High School. Cactus High School has a young student at an extended care facility, focusing on food production training. The Hyatt Regency of Scottsdale currently has an intern from the 2+2+2 Hospitality Career Management class. A sophomore from Mesquite High School has been offered a job at the Sheraton Mesa Hotel.

Student reports on destination events. Scottsdale hospitality students will be completing essays on tourism-related events by April 1999.

Field trips. High school students from the Scottsdale District took six field trips to hospitality-related businesses. Students from Peoria High School participated in 3 field trips. 50 Culinary Arts students from Mesquite High School took monthly field trips. V. H. Lassen participated in Camp Hyatt at the Hyatt Regency Phoenix in April, with 25 students dressing the part and job shadowing with hotel staff. Moon Valley High School took 15 field trips with their HERO/COE and culinary classes.

Guest speakers. 9 professionals and authorities representing industry, communities, education, and culturally-related organizations made presentations to Saguaro and Desert Mountain High School students. 25 business and industry representatives spoke at Moon Valley High School.

Career fairs. Students from Moon Valley High School, Highland High School, Superstition Springs Elementary, Carson, Fremont, and Mesa Junior High Schools, and Mesa, Red Mountain and Westwood High Schools participated in tourism and experience-related career fairs.

Student projects. 26 students from Desert Mountain and Saguaro High Schools planned and implemented an annual Hospitality Career Breakfast for 100 school administrators, counselors, and industry representatives.

Increased opportunities for post-secondary education. Culinary Arts students from partnering high schools (*e.g.*, Cactus, Peoria, Mesquite, Gilbert and Chandler High Schools) participated in C-Cap competitions, in which they were able to receive scholarships to further their education. A Cactus High School junior won the statewide C-CAP competition in 1999 and will travel with his teacher to London to study at the Le Cordon Bleu this summer.

Database of employment opportunities. The Chandler District has developed a database of culinary arts work-based learning opportunities.

Student Vocational Organizations/Clubs. 50 students at Mesquite High School participate in a Culinary Club that caters special events and sponsors monthly field trips/guest speakers. V. H. Lassen also has a food-related club, The P.R. Club (The Positive Reflections Club). Scottsdale HERO students competed in work-skills contests (*e.g.*, job interviewing, front desk competencies).

Mentoring of elementary students. Mesquite High School students are teaching etiquette to Islands Elementary students. Desert Mountain and Saguaro High School students are working on public speaking skills with students at Kiva Elementary and Mohave Middle School.

School/business connections. The Hospitality Coordinator for the Scottsdale Unified School District's elementary and middle school program is also the Training Director at the Hyatt Regency of Scottsdale at Gainey Ranch. The culinary arts teacher at Mesquite High School has trades and industry certification and strong industry contacts.

Articulation agreements. Scottsdale's high school students are able to earn 3 credits from Scottsdale Community College for completion of the second semester hospitality class. Students will receive an additional 6 credits for an internship.

Goal 3: Technical Assistance

Ongoing Needs Assessment

The Executive Board (through monthly meetings) and the Advisory Board (through meetings three times/year) examine the needs of the partnership.

Curriculum/Assessment Initiatives (Including Career Pathways, K-12 Workplace Skills, applied/contextual curriculum)

Curriculum/assessment initiatives have been detailed in the STW Elementary, Middle, High School, and Postsecondary Initiatives section above.

Professional Development Initiatives (Including business and educators)

Partnering school districts receive stipends of $1000 per teacher. District needs (*i.e.*, which curriculum is being implemented and the experience level of the teachers to be trained) dictate the use of the stipend moneys. The Tourism and Experience Partnership has identified a menu of professional development options for educators (*e.g.*, seminars, conferences, internships, and job shadowing). Tentatively 42 teachers from 9 participating districts will receive training related to ProStart and the food production/culinary arts. 34 teachers from 9 of the participating districts will receive training related to LOP and the lodging industry. Examples of the types of professional development activities provided by the partnership in 1998/99 are:

- 21 teachers and school administrators went to NAU in November to learn about the Hotel and Restaurant Management (HRM) Program.
- State conference to inform 350 school counselors of the educational and employment opportunities in Tourism and Experience (March).
- Teacher/counselor internships and job shadowing programs
  - 2 from Gilbert Unified School District,
  - 2 junior high school teachers from Mohave interning at the Hyatt Regency of Scottsdale at Gainey Ranch,
  - 1 high school Culinary Arts teacher and one Marketing teacher from Tempe High School (job shadowing at Homestead Guest Studios), and 4 high school teachers from the Peoria Unified School District.
- ProStart training at Scottsdale Community College for 27 teachers participating in food production/culinary arts programs.

Goal 4: Community Involvement
(Including employers and the community-at-large)

On September 30, 1998, the Maricopa County Tourism and Experience STW Partnership had 37 business/other partners (23 businesses, 4 associations, 2 postsecondary institutions, 4 government agencies, and 4 miscellaneous partners). The originally targeted number of business/other partners (per the 1998 proposal) was 32 businesses, 4 associations, and 1 postsecondary school. By May 1999, the partnership had increased the number of business/other partners to 68 (Table 3), an increase of 108%.

One of the goals of the Maricopa County Tourism and Experience STW Partnership is, "to increase public awareness of STW initiatives through recruiting new business, education, and organization partners." To accomplish this goal, the partnership has identified potential schools and businesses. From the list compiled, "targeted" partners are recruited through materials distribution and small group or "face-to-face" meetings. The first quarter's public awareness log of the partnership shows 72 one-on-one/small group (10 people or less) meetings. Examples include conferences with personnel from the United Way, Scottsdale Community College, Arizona Film Commission, Mahogany Run Restaurant, and Arizona Women in Food and Wine. Meetings with potential school partners include Precision High School, Wickenburg High School, Buckeye High School, Cortez High School, and a Tourism and Public Relations Roundtable of West Side schools.

The "personal" approach has generated results. The Scottsdale Hospitality Consortium[7] donated $1000 to provide transportation for student job shadowing. The City of Scottsdale, one of the Scottsdale Hospitality Consortium members, donated printing and publishing costs for a brochure about the Scottsdale Hospitality Program. The Hyatt Regency of Scottsdale at Gainey Ranch provided 11 day internships for teachers and allowed 100 elementary students to job shadow. The Arizona Restaurant Association had 100 businesspersons willing to be industry mentors. The Mesa Convention and Visitors Bureau sponsored and provided transportation for a one-day hospitality extravaganza tour for teachers and counselors from five junior high schools. The Vice-President and Director of Public Relations & Education for the Arizona Hotel and Motel Association connected the partnership with human resources personnel at business properties to enable job shadowing experiences to occur. Red Lobster donated dishes for use in school culinary arts programs.

Goal 5: Public Awareness

As mentioned in community involvement, the Maricopa County Tourism and Experience Partnership seeks "to increase public awareness of STW initiatives." One of the ways in which the partnership does this is to set up booths and maintain a marketing presence at Lodging and Restaurant special events (*e.g.*, Greater Southwest Lodging & Restaurant Show, and the Governor's Conference on Tourism). In addition to the distribution of materials in small group meetings, the partnership mails from 44 to 5000 industry newsletters to people throughout the state. Articles on the Maricopa County Tourism and Experience Partnership were included in issues of:

- *The Arizona Tourism Alliance Newsletter*
- *The Arizona Society of Association Executives Newsletter*
- *The Arizona Restaurant Association Newsletter*
- *The Arizona Restaurant Association Industry Highlights and Culinary Careers*
- *The Arizona Restaurant Association Foundation's "What's Cookin' ProStart Newsletter"*
- *The Arizona Restaurant Association Bulletin*
- *The Arizona Restaurant Association's Insight*

Other public awareness activities include presentations at the VHRA & Hospitality Human Resources Association Luncheon (150 business people), STRIVE Leadership Conference (100 students), AHMA Stars of the Industry Awards Luncheon (270 people), Mesa Public Schools Op Shop (3000 people). Materials were distributed to 125 businesses at the Valley Hotel and Resort Association Media Reception.

Students from the partnering schools also act to increase awareness of the Maricopa County Tourism Partnership. During National Tourism Week in May, high school students will be speaking to the Scottsdale Chamber of Commerce. High school students also distribute flyers and make presentations to underclassmen.

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[7] Comprised of the City of Scottsdale, Scottsdale Community College, Scottsdale Unified School District, Northern Arizona University, and the Hyatt Regency Scottsdale at Gainey Ranch.

Table 3
Active Business/Other Partners for the Tourism and Experience of STW Partnership (FY 1998-99)

Partner Name	Size of Business*			Associations	PS Education	Government	Miscellaneous	# Total
	0-49	50-499	500+					
Anzio Landing Italian Restaurant	1							
BEI Sportswear	1							
Don & Charlie's Restaurant	1							
Eddie Matney's Epicurian Trio	1							
Elan Travel American Express	1							
Landmark Restaurant	1							
Lato Supply	1							
Presentation Services	1							
Mesa Convention and Visitor's Bureau	1							
Tom's Tavern and Restaurant	1							
TOTAL 0-49	10							10
Best Western Papago Inn		1						
Bill Johnson's Big Apple Restaurants		1						
Country Inn & Suites		1						
Embassy Suites Biltmore		1						
Embassy Suites Greenway		1						
Embassy Suites Scottsdale		1						
Fiesta Inn		1						
Greater Phoenix Convention & Visitor's Bureau		1						
Hampton Inn & Suites-Tempe		1						
La Quinta Inn- Greenway Rd		1						
Macayo's		1						
Manuel's		1						
Mesa Hilton Pavilion		1						
Phoenix Country Club		1						
Phoenix Hilton Suites		1						
Pro Dine		1						
Ramada Plaza Hotel		1						
Renaissance Cottonwoods		1						
Sheraton Crescent Hotel		1						
Sheraton Mesa Hotel		1						
Sheraton San Marcos Resort		1						
The Buttes Resort		1						
TOTAL 50-499		22						22
American Express			1					
Aramark			1					
Arizona Republic			1					
Best Western International			1					
Crowne Plaza Hotel			1					
Hyatt Regency of Phoenix			1					

Table 3 continued	Size of Business*							
Partner Name	0-49	50-499	500+	Associations	PS Education	Government	Miscellaneous	# Total
Hyatt Regency Scottsdale at Gainey Ranch			1					
Marriott Camelback Inn			1					
Marriott Mountain Shadows			1					
Motorola- Food Works			1					
Outback Steakhouse			1					
Pointe Hilton at South Mountain			1					
Pointe Hilton at Squaw Peak			1					
Pointe Hilton at Tapatio Cliffs			1					
Red Lobster			1					
Southwest Gas			1					
The Arizona Biltmore			1					
The Wigwam Resort			1					
USA Today			1					
TOTAL 500+			19					19
TOTAL BUSINESS PARTNERS	10	22	19					51
Arizona Hotel & Motel Association				1				
Arizona Restaurant Association				1				
Arizona Tourism Alliance				1				
Valley Hotel and Resort Association				1				
TOTAL ASSOCIATIONS				4				4
Gateway Community College					1			
Scottsdale Community College					1			
The Art Institute of Phoenix					1			
TOTAL POSTSECONDARY EDUCATION					3			3
Arizona Office of Tourism						1		
Bureau of Land Management						1		
City of Glendale						1		
Scottsdale Office of Tourism						1		
Arizona Film Commission						1		
TOTAL GOVERNMENT						5		5
ADE Family and Consumer Sciences							1	
ADE Guidance and Counseling							1	
State Board of Directors for Community Colleges of Arizona							1	
Parent							1	
Scottsdale Hospitality Consortium							1	
TOTAL MISCELLANEOUS							5	5
TOTAL BUSINESS/OTHER PARTNERS	10	22	19	4	3	5	5	68

* Number of Employees

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Goal 6: System Evaluation

The Tourism and Experience STW Partnership participates in the overall state evaluation plan, which incorporates both state and federal reporting responsibilities. In addition, the Partnership Director has contracted with an outside consultant to assurance compliance with state evaluation requirements, which include a partnership self-evaluation plan. The evaluator works with the advisory council's evaluation committee to determine partnership evaluation design, documentation of success, and relevant data to be collected. The evaluator was responsible for designing, administering, and analyzing the business survey (see community involvement).

As part of the partnership's evaluation effort, business partners are being surveyed to reaffirm their willingness to participate in STW activities. Businesses are being asked to indicate on what level they are willing to commit their resources (*e.g.*, providing job shadowing experiences for students and internships for teachers, or acting as guest speakers/presenters). The information collected will be used to create a database for matching students and teachers with appropriate experiences.

Discussion

Partnership Assets

The Maricopa County Tourism and Experience Partnership has active, engaged business partners. Per the Partnership Director, "The biggest growth or success is that business people get the "big picture." Business and education see the need to partner together, in order to help students find viable careers, with industry's role to groom them in the workplace. Schools are beginning to make deeper inroads with business/industry. Business partners go beyond sitting on an advisory board in their commitment to providing STW experiences for students and teachers."

Another advantage of the partnership, per the director, is the involvement and support of state and national tourism and experience industry associations. These entities have brokered resources and have provided stability and technical assistance to the partnership in its first year of STW implementation. Even if local schools or businesses experience staff turnovers, affiliation with larger associations helps to provide some degree of continuity.

The partnership has recruited teachers with varying levels of networking experience relating to business and industry. Teachers with strong industry connections are able to provide examples of "real-life" applications for students. Further, they are able to "speak the language" of industry and network to provide the work-based experiences so necessary for STW to be successful. Per the Partnership Director, teacher dynamics (*i.e.*, their knowledge base and comfort level in dealing with industry) has a high correlation with a thriving partnership.

Finally, the Tourism and Experience Partnership is actively engaged in providing students with integrated school-based, work-based, and connecting STW experiences. Curriculum integration with vocational and academic classes, certificates of mastery, student-based enterprises, student job shadowing, mentoring of elementary students by high school students, and strong student vocational organizations are among the opportunities being afforded students from partnering schools.

Partnership Challenges

The Partnership Director, business and school partners listed numerous challenges faced by the Tourism and Experience Partnership this year. The following is a list of difficulties encountered:

- Diversification of industries represented. The partnership met this challenge by inviting the Arizona Tourism Alliance to sit on the Advisory Board and also invited some of its member businesses to serve on sub-committees.
- Creating school "buy-in" or ownership of School To Work. Administrator support was seen as crucial in meeting this obstacle. Sometimes it was difficult to "get beyond district politics."
- "Paperwork" problems. Given that the partnership has 36 schools, the lack of clerical assistance is perceived as problematic.
- Articulation. Transitioning STW students from elementary to high school districts (*i.e.*, non-unified districts) is a challenge. The lack of consistency in articulation agreements between partnering schools and postsecondary schools within the Maricopa County Community College System is another concern.
- Equipment-related problems. Culinary arts students in a new high school cooked on hot plates in a science lab while kitchens were being completed. Older schools lack commercial food production equipment or the money to retrofit existing facilities.
- Job shadowing/Student internships. The primary factors deterring the development of job shadowing and student internship opportunities are:
  - The lack of "students that are truly prepared with basic skills and a work ethic, that can go directly into a workplace" ;
  - Teacher's inability to leave school to monitor student interns during school hours, unless they have a HERO/COE program;
  - Liability concerns;
  - Lack of transportation; and
  - Year round school calendar.
- Working within existing education systems. School district business services policy that shuts down an administrator's ability to process purchase orders several months before the STW contract ends is a concern. Wide policy variance is seen from one school district to another.
- Field trips. Parental scrutiny, lack of substitute teachers, high school scheduling conflicts and a small industry time window (*i.e.*, restaurant field trips have to be completed before the "lunch or dinner rush") challenged the scheduling of field trips. The partnership had guest presenters come to the schools in lieu of some planned field trips.
- Teacher experience. Many teachers lacked the five years of industry management experience that is demanded for Scottsdale Community College's hospitality certification. This requirement is a Scottsdale Community College policy and not that of the State Board of Community Colleges of Arizona. Consequently, dual credit is not an option to students at a majority of participating schools.
- Staff turnover. A change in a school counselor delayed administration of career interest inventories in one of the schools.

Summary and Suggestions

In summary, the Maricopa Tourism and Experience STW Partnership has made significant progress in the accomplishment of identified 1998/99 goals. The Tourism and Experience STW Partnership has an established governance structure. Leaders of the primary Arizona associations related to the hospitality, restaurant, and tourism industries serve on the advisory council and subcommittees and are actively involved in policy and decision making. Business partner recruitment goals have been exceeded. The advisory council and executive boards have addressed the issue of sustainability, albeit informally.

The partnership coordinates activities with existing educational and/or training programs and has made higher education linkages. Post-secondary and high school expansion plans have been surpassed. Rollout plans for ensuing years have been discussed.

Attempts have been made to integrate tourism and experience STW activities with other initiatives or partnerships. Special populations are being served. Students are participating in school-based, work-based, and connecting activities.

The partnership examines ongoing needs through Advisory Board and monthly Executive Board meetings. Two nationally accredited curriculums (Lodging Operations Program and ProStart) are being integrated into district curriculums. Some partnering schools are implementing articulation agreements, student career portfolios, and Career Pathways. Teachers have been given STW professional development opportunities.

Although the partnership has accomplished most of its goals and objectives, elementary and middle/junior high school rollout goals for 1998/99 will not be met. Individual education partners have been challenged in satisfying deadlines for their proposed goals and objectives (*e.g.*, Tempe's third intercession job shadowing placement, GSPED training of Chandler High School guidance staff, Gilbert culinary arts articulation, middle school job shadowing and administration of career interest inventories in Scottsdale).

Finally, the Maricopa Tourism and Experience STW Partnership has attempted to engage the larger community and has made public awareness efforts. The partnership has complied with state, national, and self-evaluation requirements.

Suggestions for consideration by the partnership include:

- Future recruitment efforts should target elementary and middle/junior high schools within existing districts. Career awareness and career exploration activities should be strengthened. Linkages between schools should be reinforced.
- The partnership should use Advisory Board members to make "one-on-one" connections so as to maximize the time spent by partnership staff and contract employees in recruitment activities.
- In-kind clerical support could free the partnership director from administrative tasks. Additional efforts could then be focused towards technical assistance to education partners.
- Professional development opportunities might include a "kick-off" STW orientation for administrators, counselors, business partners, and other individuals not readily buying into the concept of STW. Teacher inservices on available dual credit options within a district might also be useful.
- Continued efforts should be made to provide sustained work-experiences for students. The partnership might consider forming an internship subcommittee to address the barriers identified above.

Water Resources Mentor Program STW Partnership

Site Visit: March 22, 1999[1]

Region Served: Maricopa County

FY 1998-99 funding: $73,020
GSPED Cluster: Environmental Technology

School Profile

The Maricopa Water Resources Mentor Program School to Work (STW) Partnership serves students in 7 school districts (2 unified, 2 high school, and 3 charter schools). The Water Resources Mentor Program STW Partnership includes schools enrolling more than 13,000 students in grades pre-kindergarten through 12 in 1998/99 (as shown in Table 1.)

Table 1
Total Student Enrollment for the Water Resources Mentor Program STW Partnership (FY 1998-99)

Grade Level	Enrollment Data (as of 10/98)*
Grades Pre-K through 6	423
Grades 7 through 8	92
Grades 9 through 12	12,589
Ungraded Elementary (K-8)	0
Ungraded Secondary (9-12)	578
TOTAL	13,682

* Enrollment data reflect 9 schools for which data were available of the 10 schools identified by this partnership.

Employers/Governor's Strategic Partnership for Economic Development (GSPED) Representation

The Water Resources Mentor Program STW Partnership has 14 business/other partners. Most (79%) are government agencies. The partnership also has 1 postsecondary institution and 2 large businesses as partners.

Goal 1: System Governance and Partnership Development:

Partnership Governance and Staff

The Water Resources Mentor Program STW Partnership has an eight-member business advisory committee. The same business members also serve in an advisory capacity to the Hydrologic Studies Program at Gateway Community College. The business advisory committee meets twice a year. An eight-person teacher advisory committee had not yet met at the time the site visit was conducted.

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[1] Observations are based upon:
- Initial intake and level of involvement information collected in fall of 1998;
- Interview on March 22, 1999, with Lisa C. Young, Partnership Director;
- School site visit to Gateway High School on March 25, 1999.

A Gateway Community College faculty member acts as the Partnership Director for the Water Resources Mentor Program STW Partnership. Gateway Community College has specified that the implementation coordinator (*i.e.*, Partnership Director) work no more than 10 hours a week "during periods of faculty accountability" and up to 40 hours per week "during other periods." Gateway Charter High School provides a staff member to act as liaison to schools/business partners, coordinate on-site visits, participate in advisory committee meetings, and chaperone students providing peer education to feeder elementary and middle/junior high schools. Salt River Project is the partnership's fiscal agent, replacing former fiscal agent Central Arizona Project in November 1998.

Sustainability

The issue of sustainability has not been formally addressed. The partnership expects to sustain the partnership via development of articulation agreements between high schools and Gateway Community College. The partnership responded to a rough draft of the site visit report by writing, "The WRMP is sustainable."

Goal 2: Program Coordination and Integration

Program Coordination and Integration

To the knowledge of the State site monitor, the Hydrologic Studies Program at Gateway Community College is the only educational program with whom the Water Resources Mentor Program STW Partnership is coordinating activities. Career pathways have not been emphasized, as programmatic focus is primarily at the postsecondary level.

Gateway Community College has provided in-kind support for the partnership in the form of transportation, office space, supplies, and faculty release time. Further, Gateway Community College is working on additional articulation agreements with partnering high schools.

Universal Access:
School Participation and Rollout Strategy

On September 30, 1998, the Water Resources Mentor Program had 8 school partners. Original partnership rollout plans for the 1998/99 fiscal year counted 23 schools by June 30, 1999 (7 elementary schools, 7 middle/junior high schools, and 7 high schools). The partnership anticipates a total of 1 elementary, no middle/junior high, and 9 high schools at the end of the fiscal year (June 1999).

No formal rollout strategy has been established. Interviews suggest that the partnership will most likely expand STW activities in existing partnering schools/districts. The Partnership Director indicated that universal student access was not a partnership goal. She said, "There is not a need for it to be huge. Industry cannot accommodate it. We cannot provide this experience for every child. They wouldn't be able to achieve the criteria. We don't want to set students up for failure. This program is not designed for every student in the Valley."

Table 2
"Active" School Participation for the Water Resources Mentor Program STW Partnership

District/Service Provider	Total Number of Schools/Programs (by grade level*)					"Active Schools" (FY 1998/99)							
	E/J	M/J	J/S	K-12	Total	School Name	# Students**	E/J	M/J	J/S	K-12	# Total	% Total
						Red Mountain HS	2-Jan			1			
Mesa Unified	54	12	8	8	82	Mesa Unified				1		1	1
						Maryvale HS	2-Jan			1			
						(Peoria HS)	2-Jan			1			
Phoenix UHSD			13	1	14	Phoenix UHSD	4-Feb			2		2	14
						Arcadia Neighborhood Learning Center	30-90	1					
						Saguaro HS	2-Jan			1			
Scottsdale Unified	19	6	5		30	Scottsdale Unified	31-90			1		2	7
						Marcos de Niza HS	2-Jan			1			
						Tempe HS	2-Jan			1			
Tempe UHSD			8		8	Tempe UHSD	4-Feb			2		2	25
						Gateway HS	7				1		
						Humanities & Science Institute	2-Jan				1		
						Precision HS	7				1		
Charter Totals						Charter Totals	15-16				3	3	
Total Public Schools	73	18	34	9	134	Total Public Schools	51-118	1	0	6	3	10	7
Private Schools													
Department of Youth Treatment													
TOTAL SCHOOLS	60	6	12	7	85	TOTAL SCHOOLS		2	1	1	0	4	5
Number of Students**						Number of Students**	827-886						

*KEY: E/J=Elementary Only or Elementary/Junior High School
M/J=Middle Schools or Junior High Schools Only
J/S=Senior High Schools or Junior/Senior High
K-12=Any combination of grades across multiple levels

** This table reflects unduplicated counts of students served (May 1999). Students may have participated in multiple STW experiences. Numbers represent estimates rather than final student counts. Numbers also include 776 high school students that attended a career fair.

Integration with Other Initiatives

No examples were given of the partnership's work with other initiatives.

Targeted Access for Special Populations

The partnership does not have specific plans for including special populations (e.g., out of school youth). However, some of the charter schools with which the partnership is working target at-risk or former school dropouts. The Partnership Director indicated that it was, "difficult to accommodate students with disabilities because of isolated nature of field work."

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STW Elementary, Middle, High School, and Postsecondary Initiatives

The following summarizes the Water Resources Mentor Program Partnership's targeted STW implementation areas.

Career Exploration Class. High school students enroll in a two-week, intensive (8 a.m.-4 p.m.) water resources technology career exploration class at Gateway Community College. The first day serves as an orientation to the water cycle (macro to micro). After the initial lecture, students have 7 days of field experiences. As part of their classwork, students complete a paper/report that relates the class to their high school experiences and identifies practical applications of math and science. The class ends with a final exam. On the last day of class, high school students work with 7th grade students in small group, hands-on activities that demonstrate "typical" water resources-related job skills. 14 students have taken the class (one group in December, another in March). Two more classes of 7 students each are scheduled for the summer of 1999.

Field Experiences. Students from the two completed classes traveled to a minimum of ten industry sites. At each site, students were exposed to multiple jobs. For example, Salt River Project allowed students to experience the Verde River Dam with an employee host. While there, a water quality person, three chemists, a dam operator, and a water master met with the students. Hands-on activities (*e.g.*, flow measurement and water testing) were built into the students' field experiences and were described in journals/notebooks the students kept of their site visits.

Miscellaneous. The U.S. Geological Survey is arranging internships for postsecondary students enrolled in the hydrology degree program. A career fair was held at Gateway Community College for 776 high school students.

Goal 3: Technical Assistance

Ongoing Needs Assessment

The Partnership Director and Partnership Liaison assess programmatic needs.

Curriculum/Assessment Initiatives (Including Career Pathways, K-12 Workplace Skills, applied/contextual curriculum)

The partnership has dual enrollment/articulation agreements with two high school districts (Tempe and Phoenix Union) and three charter schools (Gateway High School, Humanities and Science Institute, and Precision High School). Students are able to receive up to 4 college credits and 1 high school earth science credit through the agreements.

In addition, an ad hoc task force of five junior high, high school, and postsecondary teachers evaluated the water resources curricula for K-12 integration. The Partnership Liaison also collected potential curriculum and Internet resources for inclusion into elementary, middle/junior high, and high school earth science classes.

Professional Development Initiatives (Including business and educators)

At the time of the site visit, no professional development had occurred. The Water Resources Mentor Program STW Partnership hoped to link businesses with teachers to provide certification training for water resources curriculum (*e.g.*, Salt River Project and the Project WET curriculum.)

Goal 4: Community Involvement
(Including employers and the community-at-large)

On September 30, 1998, the Water Resources Mentor Program STW Partnership had 9 business/other partners (7 government agencies, 1 business, and 1 postsecondary institution). Per the 1998/99 proposal, the Water Resources Mentor Program STW Partnership expected to have a total of 12 business/other partners by the end of the contract cycle. By May 1999, the partnership had 14 business/other partners (11 government, 2 business, and 1 postsecondar,). (Table 3)

Some partners have provided STW opportunities for students. The U.S. Geological Survey has connected postsecondary students with nationwide internships. The Central Arizona Project has donated $2500 in tuition scholarships for high school students. Gateway Community College donated a 10-passenger van for field trips.

Table 3
Active Business/Other Partners for the Water Resources Mentor Program STW Partnership (FY 1998-99)

	Size of Business*					
Partner Name	0-49	50-499	500+	PS Education	Government	# Total
Intel			1			
Motorola			1			
Total 500+			2			2
Gateway Community College				1		
TOTAL POSTSECONDARY EDUCATION				1		1
Arizona Department of Environmental Quality					1	
Central Arizona Water Conservation District					1	
City of Chandler					1	
City of Glendale					1	
City of Mesa					1	
City of Phoenix					1	
City of Scottsdale					1	
Flood Control District of Maricopa County					1	
Salt River Project					1	
Town of Avondale					1	
U.S. Geological Survey, Tempe Office					1	
TOTAL GOVERNMENT					11	11
TOTAL BUSINESS/OTHER PARTNERS			2	1	11	14

* Number of Employees

Goal 5: Public Awareness

The Partnership Director has made presentations to the Arizona Flood Plain Management, Arizona Science Teachers Association, Water Quality Association, and Valley Forward Earthfest. Both the Arizona Republic and the "Water Conditioning and Purification Journal" have done articles about the partnership. Salt River Project has referenced the partnership in teachers' bulletins, employees' bulletins, and its annual report. Channel 3 featured the partnership in the *Brainstorm* TV show.

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Goal 6: System Evaluation

The Water Resources Mentor Program STW Partnership participates in the overall state evaluation plan, which incorporates both state and federal reporting responsibilities. The partnership was challenged in meeting evaluation deadlines because of fiscal agent turnover. The partnership intends to survey students as to changes in perception/attitude, conduct phone surveys to determine later course enrollment, collect student performance data, and interview teachers and industry as to perceived program benefits. Evaluation forms and enrollment logs are being developed.

Discussion

Partnership Assets

The connection with Gateway Community College is a partnership strength. The strong association has helped in student transition to postsecondary education. Of the 30 students served by the Water Resources Mentor Program in 1997/98, 25 went on to postsecondary training. The Partnership Director, a Gateway Community College faculty member, has been able to leverage business connections to provide work-based experiences for high school students.

The field experiences offered to students have been another partnership asset. The trips go beyond a typical lecture-format tour in providing students with real-life job skills demonstrations. Business partner support for these field experiences has been strong.

Partnership Challenges

The Water Resources Mentor Program STW Partnership has faced numerous challenges this year. The following is a list of obstacles encountered:

- Loss of Fiscal Agent. Loss of the partnership's first fiscal agent in the early fall severely delayed implementation of STW activities. By the time the new fiscal agent was approved in late November 1998, an entire semester of potential STW activities had been lost. As originally conceived, the Water Resources Mentor Program was intended to be implemented at high school sites. Students would be pulled out of the classroom once every other week for field trip experiences. The loss of the fiscal agent meant that school-based implementation was not possible. The partnership reacted by hosting short-term intense sessions at Gateway Community College. The change in scheduling meant that the partnership was limited to working with charter and year-round schools, because of calendar conflicts.
- "Paperwork" problems. The amount of paperwork required by the State is perceived to be onerous. Concern was expressed over the time gap between the time a service was rendered/activity took place and reimbursement.
- Supplies and equipment. Program implementation was challenged because needed equipment and supplies could not be purchased.
- Time constraints. It was difficult to coordinate advisory committee meetings (both business and teachers) because of scheduling and time constraints.
- Students served. The partnership was limited in the number of students it could serve because the program van could only hold ten people. Business partners were only able to accommodate small student numbers because of the intense nature of field experiences.
- Teacher experience. Implementation of water resources technology curriculum in the schools is complicated by the lack of teacher certification/experience. Without certification, high school teachers are challenged in delivering curriculum. The partnership does not have the resources to conduct the training.

Summary and Suggestions

Loss of the fiscal agent early in the contract year greatly impacted implementation progress of the Water Resources Mentor Program STW Partnership. Although business partner recruitment goals for the year have been exceeded, the partnership has accomplished few targeted State and partnership goals. Opportunities for regular partnership input, planning, and monitoring are infrequent (twice a year), despite an established business advisory committee. The teacher advisory committee has never met. Two part-time individuals are responsible for partnership development, program coordination and integration, technical assistance, community involvement, pubic awareness, and evaluation. Sustainment of the partnership beyond federal funding has not been formally addressed.

The partnership coordinates activities with the Hydrologic Studies Program at Gateway Community College (GWCC). GWCC also provides in-kind support for the partnership. Linkages with other initiatives and other Maricopa STW partnerships have been minimal.

The partnership does not have concrete plans for rolling out to additional education partners. Universal access for students is not a goal, due to the limited capacity of business partners to accommodate students and the academic prerequisites necessary to enter the field. The number of partnering K-12 schools is low (10) compared to projected growth in school partners (23 schools). The partnership has surpassed recruitment goals only in the number of charter schools (3 versus a projected 2).

A small number of elementary and junior high school students have participated in school-based, work-based, and connecting STW activities. The partnership said that it would serve 1152 elementary school students, 288 junior high school students, and 90 high school students. No elementary school students, approximately 90 junior high school students, and 776[2] high school students will be served by the partnership this fiscal year. Factoring in planned or anticipated STW activities, an estimated 886 students will be exposed to STW activities. This represents 58% of the 1530 students that the partnership originally had targeted.

Eleventh and twelfth grade students have participated in career exploration classes and field experiences. Seventh grade students have been exposed to water resources technology through peer education. 14 Postsecondary students will have had internship opportunities by August of 1999.

The Water Resources Mentor Program STW Partnership has completed articulation agreements with 4 districts/charter schools. A curriculum and Internet resource file for teachers has been compiled. However, curriculum was not implemented in K-12 schools. No professional development activities have occurred this year.

Business partners have provided students with field experience opportunities, monetary and transportation support, and internship connections. Businesses have not quantified the number of entry-level technicians needed by their companies. Guest speakers did not give presentations to feeder elementary and junior high schools this year.

Presentations, newspaper/magazine articles, and employee bulletins are the primary means of publicizing the partnership. State and National evaluation requirements have been met to date, albeit with delays. The partnership has devised a plan to evaluate the success of the Water Resources Mentor program.

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[2] 766 high school students attended a career fair. 30 students will or have participated in integrated school-based, work-based, and connecting activities.

The name of the partnership Water Resources Mentor Program STW Partnership suggests that the scope of the partnership is more programmatic than systemic. The lack of an operating governance structure, planning functions, growth in the number of schools and students served, and public awareness and professional development activities suggest that this is more a program with STW elements, than a STW partnership.

Additional suggestions for consideration by the partnership include:

- Increase the diversity of the advisory board to reach and incorporate private businesses (*e.g.*, hydrogeological consultants and xeriscape landscapers). More public awareness efforts (*e.g.*, press releases, articles in industry trade papers) might be used to help in this goal.
- The Water Resources Mentor Program STW Partnership should address partnership expansion and sustainment in a more formal manner. Consideration should be given to expanding the partnership to reflect additional dimensions of the environmental technology cluster or incorporating the Water Resources Mentor Program within the structure of another partnership.
- Strengthen the governance structure:
  - Develop a yearly calendar of business and teacher advisory committees meetings so as to resolve scheduling conflicts.
  - Establish e-mail, fax, and telephone conference opportunities to provide monitoring between meetings.
- Continued dialog with the State, attendance at monthly Maricopa Partnership meetings, and one-on-one contacts between the Partnership Director/appropriate state personnel will help to facilitate communication.
- The Water Resources Mentor Program STW Partnership needs to strengthen the career awareness and career exploration aspects of the partnership. Strategies to accomplish this might include:
  - Focus education partners recruitment efforts on elementary and junior high schools within participating districts to create a longer-term vision of STW.
  - Expand the "mentoring" aspect of peer education beyond a one-day, small group activity.
- The partnership needs to provide more school-based, work-based, and connecting activities for students.
- Gateway Community College could use its Maricopa Community College District connections to leverage additional postsecondary involvement in the partnership.
- Greater efforts should be made to provide teachers with professional development opportunities so as to promote curriculum integration on the K-12 levels.
  - Business partners with the ability to provide certification training to teachers should be engaged to do so.
  - Teachers who are certified should be enlisted to provide certification training to other teachers.
- Partnership goals/objectives and evaluation plans should reflect the six state goal areas (*i.e.*, system governance and partnership development, program coordination and integration, technical assistance, public awareness, and evaluation).

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